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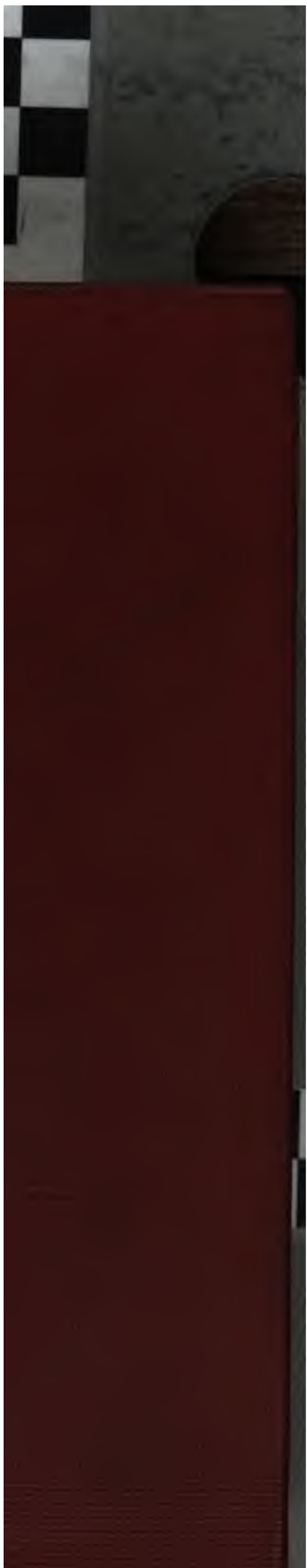
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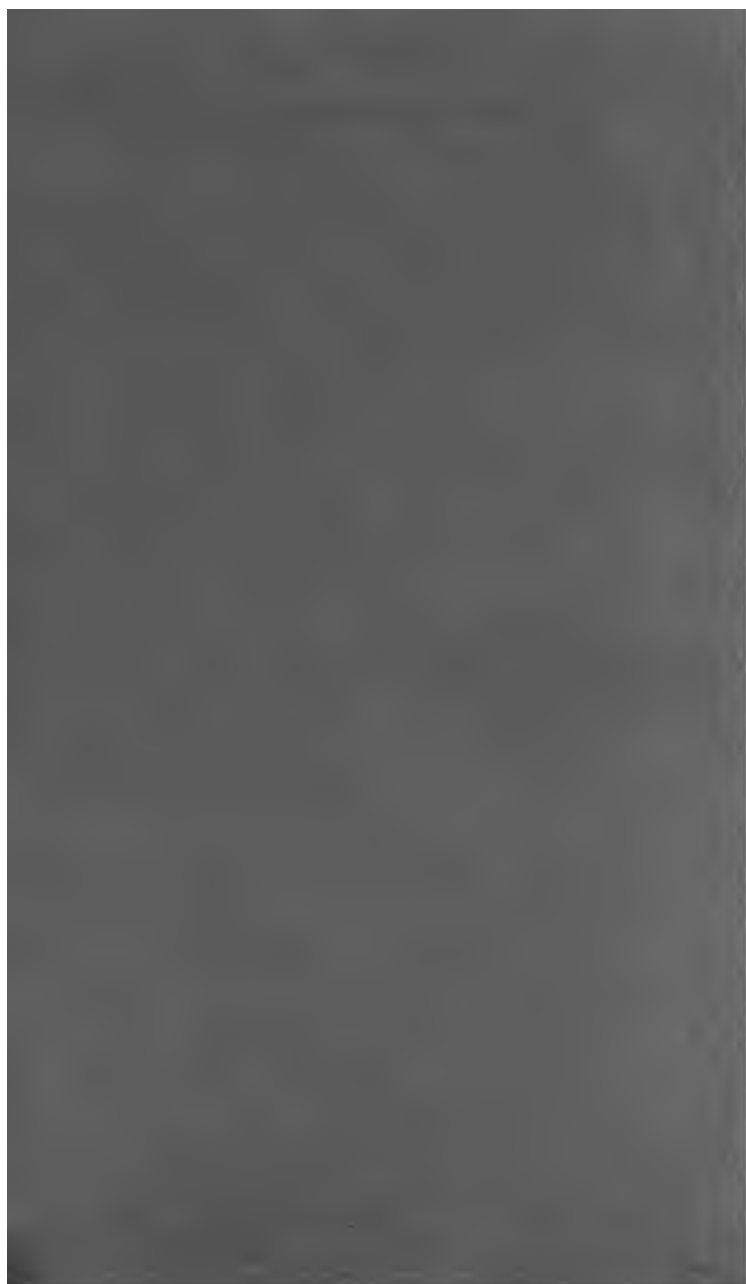
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FOR
LIFE ASSURERS.

BEING A POPULAR TREATISE ON THE SYSTEM OF LIFE
ASSURANCE AND LIFE ANNUITIES ; ITS ORIGIN AND PROGRESS ;
THE SCIENTIFIC FACTS ON WHICH IT IS FOUNDED ;
EXPOSITION OF ITS ADVANTAGES AND OF ITS USEFUL APPLICATION
TO THE DIFFERENT CLASSES OF THE COMMUNITY ;
MODES OF ALLOCATING PROFITS, AND TABLES OF PREMIUMS
DEDUCED FROM EXPERIENCE ; WITH THE RATES OF PREMIUM
OF THE ASSURANCE COMPANIES ; ALSO

A GENERAL DIRECTORY OF THE
LIFE ASSURANCE COMPANIES AND SOCIETIES
IN GREAT BRITAIN AND IRELAND ;

With their Capitals, Life and Annuity Funds, and other particulars.

BY

JARDINE HENRY, +

AUTHOR OF THE "GOVERNMENT ANNUITY TABLES" AND OF THE
"GOVERNMENT LIFE ANNUITY COMMUTATION TABLES."

Second Edition.

EDINBURGH:

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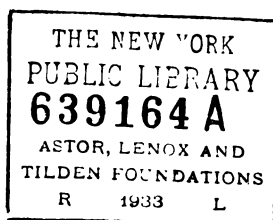
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PREFACE TO SECOND EDITION.

THE First Edition of this little work, published 1842 anonymously, was written, the Preface, reprinted in Second Edition, and Third Chapter, The General Principles of Life Assurance, also reprinted with trifling exceptions, by the late Mr William Bridges, Secretary to the Edinburgh and Glasgow Assurance Company (afterwards Life Association of Scotland), and subsequently Secretary of a London office. The rest of the work was the composition of the author of this Second Edition, who had been applied to by the publisher, Mr John Mortimer, of Wigmore Street, Cavendish Square, to write the work. The author had been employed as the Actuary in the office referred to, which was the means of his being acquainted with Mr Bridges, and asking him to take a portion of the work.

Since that period, as is well known, the business of Life Assurance has enormously increased in extent and importance, both in this country and its colonies, and also in Europe generally, and in the United States of America in particular. Indeed the latter country has fairly distanced the mother country in the magnitude of the operations of at least three of its life offices, which exceed in amount of funds any offices in Great Britain. The system, however, in its practical origin, must be held to have had its foundations laid in this country, and also in this country has the practical development of the structure proceeded, up to the date of the publication of the first edition of this work, as already stated, in 1842, since which time the American offices have arisen, and made their wonderful

progress. These latter had thus the advantage of copying the features of a long-established system, and of being also enabled to make such improvements on the system as suited the circumstances of their country and times.

One improvement of the greatest importance is due to America, viz., the application of the Surrender Value of a Policy, where the Policyholder has been unable to continue the payment of the Premium, to maintain that Policy in force, either to its full amount for the period its Surrender Value warrants, or to a portion of its amount, and that for the whole remainder of its term, whether for a partial period or for life, by means of a Paid-up Policy, free from all further premium.

During this period also, of nearly half a century, have been formed societies for advancing the knowledge of the subject, and also having for their object the promotion of practical improvements. The Institute of Actuaries of Great Britain and Ireland, and the Faculty of Actuaries in Scotland, with headquarters respectively in London and in Edinburgh, have done much in this direction; and by the combined efforts of ten of the older life offices in each city has been furnished the Experience of the Institute of Actuaries, universally recognised as the latest and most authentic result of the observation of assured life mortality, and adopted by the majority of offices in Great Britain and in the United States of America as the basis of their periodical valuations of Life Policies.

It would be unpardonable to omit reference to what has been done by the Government of this country during the period above referred to, for the object of safeguarding the interests of the public, as well as advancing the knowledge of the real duration of human life.

This has been accomplished by means of "The Life Assurance Companies Act, 1870," and the valuable series of reports annually deposited by the Life offices with the Board of Trade since that Act came in force, and the summary of their

results given in 1882, and since that year in schedules annexed to the whole returns for each year.

As regards the National Experience of Mortality, the public are indebted to the scientific labours of the late Dr Farr, Assistant Registrar-General, for the English Life Tables, Nos. 1, 2, and 3, founded on the Census 1841, and on the Annual Mortality of the years 1841, and of 1838-44, and founded on the Censuses 1841 and 1851, and seventeen Years' Mortality, 1838-54. Dr Farr also published a series of Tables, in Commutation form, at 3 per cent. interest, from which can be deduced the values of Life Annuities for all combinations of two joint lives of males and females, and also the values of Life Annuities on single lives of males and females at various rates of interest besides 3 per cent. These Tables were calculated by Scheutz's machine, purchased by Government at a cost of about £1200, and have been used by the Government in their Life Assurance Scheme connected with the Post Office, and have also been used by Life Assurance Companies in valuation of liabilities.

In Life Annuities, the valuable observations made by Mr Alexander Glen Finlaison, Actuary of the National Debt, were published in 1860, and would have been adopted by the author for his work of *The (British) Government Life Annuity and Commutation Tables*, 6 vols. (and parts) 4to, 1209 pp. (London: C. & E. Layton, 1860-85), had not Mr Finlaison advised continuation on the same basis as in *The Government Annuity Tables*, 2 vols. royal 8vo, 791 pp. (London: Groombridge & Sons, 1859), also published by the author.

These latter were founded on the whole Experience of the British Government Tontine and Life Annuitants from 1693 to 1825, as contained in Mr John Finlaison's report of 1829. It will be seen, from a Table given in the present work, that the Carlisle Experience, 1779-87, is almost coincident with the Mean of the Expectation of the lives of males and females by

that British Government Life Annuitants Experience. It is remarked also, that the illustrations in this present work of the values of the Premiums in different Life Assurance cases, are taken from the British Government Female Experience, 3 per cent. interest, and that the Institute of Actuaries' Healthy Males Table is, for ages from 20 to 45, very nearly the same (when the latter is calculated at $3\frac{1}{2}$ per cent. interest) with this British Government Female Experience at 3 per cent. interest.

The observation of the Sinking Fund Male and Female Annuitants, comprehending the period from commencement, 1808, to 1875, has been published by Mr Alexander John Finlaison, the present Actuary of the National Debt, and was adopted by Government in April 1884 as the basis of their future transactions, at the National Debt Office, and Post Office, for Life Annuities, superseding the Tables of Mr John Finlaison in use from 1830 up to that date.

Besides the Tables founded on the Experience of the English Life Table, and the Government Annuitants Experience, Tables on Institute HM basis have been published for valuation of Policies on Assured Lives by Mr Ralph Price Hardy, F.I.A., calculated by arithmometer of M. Thomas (de Colmar). The useful Tables of Annuities at various rates of interest, and on single and two joint lives, founded on the Carlisle Experience, by Mr David Chisholm of Edinburgh, Actuary of the North British and Mercantile Insurance Company, are well deserving of notice.

Giving, as is generally admitted, a near approximation to the average of healthy life in England, the Carlisle Tables are not likely to become obsolete, and the two volumes of Mr Chisholm's work, the impression of which is understood to be exhausted, may well be reprinted.

The late Mr Cornelius Walford has left behind him, in *The Insurance Cyclopædia*, a work of a highly interesting nature, more particularly in the details, furnished from original

sources, of the means adopted during the Middle Ages by the Guilds, which distinguished these and much earlier times, to supply the wants of society in the absence of the life assurance system of our times. Its completion, which is understood to be practicable, from the copious MS. of the author devoted to the subject, would be hailed by an extensive circle as a most desirable object.

Such periodicals as the *Journal of the Institute of Actuaries*, and the *Post Magazine Almanack Insurance Directory and Year Book*, along with the *Insurance Register* of Mr William White, Fellow of the Statistical Society, have also been very useful, particularly the *Journal* to which Mr Woolhouse, F.R.A.S., Mr Peter Gray, F.R.A.S., and other gentlemen of scientific knowledge and experience have contributed.

It is not practicable to go at length into an enumeration of all who have assisted in the development of the system, but two gentlemen cannot well be omitted, Mr T. B. Sprague, M.A., who contributed a valuable Report to the Government upon the proper basis for the New Government Life Annuities, along with the Government Actuary, but in a separate form, and Mr James Meikle, F.L.A., Chairman of the Faculty of Actuaries in Scotland, whose valuable labours in connection with the Ten Scottish Offices Experience have been highly appreciated.

It is pleasant, in reference to the depression which has affected Life Assurance, as well as other branches of business, to observe symptoms of revival, and the hope may thus be entertained that the temporary check to its advancement will ere long be removed.

Any corrections or additional information will, in connection with this Second Edition, be thankfully received by

THE AUTHOR.

PORT SETON, BY EDINBURGH,
March 1887.

PREFACE TO FIRST EDITION, 1842.

THE science of Life Assurance, now so invaluable an element in the transactions of life, dates its origin from the middle of the seventeenth century. The first publication on the subject of Probabilities appears to have been Huygen's *Treatise of the Dice*,* which was printed in 1658. A few years after this, John De Wit made application of the slight knowledge of the science then current, in a small pamphlet on *Life Annuities*, and towards the end of the seventeenth century Halley followed up these works by his *Observations on the Mortality observed at Breslaw*.

In 1724 came De Moivre with his ingenious *Theories of Annual Decrement*; and in 1742 Mr Thomas Simpson, by a *Series of Comprehensive Formulæ*, first gave stability to the modern science of Assurance. De Parcieux and Price thereafter published their *Views and Observations*; then Morgan and Maseres; and the most important problems connected with the science were subsequently very ably solved by Mr Baily, Mr Joshua Milne, and Mr Davies.

While the *science* of Life Assurance has been thus carefully and profoundly treated by mathematicians and philosophers, the *practical application*, though now coming home to the business and bosoms of many thousands in England, has been

* *Pascal* and *Fermat*, according to the statement in *Insurance or Assurance*, 1856, by the late Mr Will. Thomas Thomson, F.R.S.E., preceded Huygens in laying the foundation of the science of Probabilities.—J. H.

comparatively neglected, and the fugitive though useful papers in *Chambers's Journal* and the *Saturday Magazine* are almost the only efforts at a familiar exposition of the subject.

To remedy the want of a popular treatise, the following pages have been compiled, and it will be sufficient in this place, for the general elucidation of the plan pursued, to specify shortly the heads under which the subject has been arranged.

First, it has been thought proper to exhibit, historically, the rise and progress of the subject in England; next, the statistics or data on which the science is based; then follow familiar illustrations of the doctrine of Probabilities connected with the duration of life; the systems pursued by the different offices; observations on the applicability of Life Assurance to the various wants and interests of the community; and directions as to the procedure necessary in effecting an assurance with any of them; and, in order to make this latter branch of the subject more practically useful, there is added a General Directory of the Life Assurance Offices in Great Britain, with their rates and various other particulars.

To insist then upon the importance of the matter treated is unnecessary; that the manner of its treatment may tend to make the duty and advantage of Assurance more generally recognised, is the earnest desire of the writers.

N.B.—Any corrections or additional information will be thankfully received by the Proprietors, addressed to Mr MORTIMER, 1 St Martin's Place, Trafalgar Square, London.



THE HANDBOOK FOR LIFE ASSURERS.



CHAPTER FIRST.

ORIGIN AND PROGRESS OF LIFE ASSURANCE.

IN the times of ancient Greece and Rome there existed no such life societies as those of modern days, dating from about the middle of the seventeenth century.

It would, however, be an altogether erroneous conclusion for us to hold that the means of establishing such life societies did not, even in those comparatively remote times, exist.

If we are to put aside names and consider simply things, life assurance is seen to be coeval with the human race, at least as soon as civil government had its birth.

The State, whether republic or monarchy or mixed, assures to all subjected to its dominion the protection of life, the secure possession of property, with the alternative, in the case of life, of the application of the laws, when these have been violated by the death or bodily injury of any of the citizens, and by the administration of justice as between man and man, so far as property is concerned. In return for these benefits the citizens or subjects give obedience to the laws, and contribute directly

directly to the maintenance and support of the Government, which assures the possession of the security they desire.

When we read in old chronicles of David I., king of Scotland (contemporary with Henry II. of England, Louis VII. of France, and Adrian IV., pope), granting to the man who acknowledged him as feudal superior his (King David's) "firm

peace," we understand by that the king's solemn assurance to his subject that the whole power within the king's command should be employed for the defence of his vassal in all his rights and possessions, by whomsoever the same should be invaded or menaced. In older times Imperial Rome offered to subject nations the same assurance of safety and protection.

X But the best specimen of an annuity (the foundation of life assurance) and its value, as regards human life, may perhaps be obtained from the result of the dealings of King Pharaoh through his Viceroy or Prime Minister, Joseph the Hebrew, in the year before the Christian era 1702.

Taking forty as the average age of the Egyptian landholder when he surrendered, presumably for the remainder of his life being all he had the possession of, his lands into the hands of the king for a subsistence for three years (the remainder of the seven years of famine), on the condition that for the remaining period of his life four-fifths of the produce of the land should belong to himself and one-fifth to the king, how stood the bargain, according to our modern ideas (after an interval of about 3600 years) of value?

By the Northampton Table, at 3 per cent. interest, the value of the surrender, in present money, of £1 sterling per annum, or its equivalent in land, was	£14·848
One-fifth of this was surrendered by the holder of the land to the king,	2·970
The present value of payment of £1 per annum for three years, reckoned at 3 per cent. interest, is	2·829
Remaining surplus of one-fifth of the value of the land during life of landholder,	·141

which, being 5 per cent. upon the present value of the annual payment, may be held as appropriated to the expenses of management.

There are at least two instances in the Old Testament Scrip

tures of the grant which, in those days, was equivalent to a life annuity—the first in the reign of King David, 1040 years before the Christian era, when that monarch said that the son of Jonathan should eat at the royal table continually. In a similar way, 587 years before the same era, the king of Judah, captive to the king of Babylon, was assigned a place at the Babylonian king's table for "all the days of his life," which was nothing else than giving, in modern phrase, an annuity payable up to the day of death.

If we inquire into the case of the Romans, as is remarked in my work of the Government Life Annuity Commutation Tables, vol. iv., General Preface, pp. vi, vii, after victorious Rome had carried her standards far and wide over conquered nations, the Roman people, as a body, residing in Rome, became life annuitants, receiving the monthly distribution of corn, termed *congiarium*, as their regular life annuity. The public baths erected by the emperors, with all their luxurious appurtenances, were simply additions to the life annuities already substantially possessed by the citizens. There was thus no room, in the condition of the Roman State, for the establishment either of life assurance or of life annuity companies, these being practically secured from the arrangements made by the State for the support of the citizens.

As for the subject nations, commerce was no doubt cultivated, but the want of freedom and the lower condition of civilisation stood in the way of improvement. Their conquerors did not bring to them the knowledge of a better system than prevailed among themselves, and the limited character of a commerce, destitute of the advantages of the mariner's compass and of the means of finding the longitude at sea by the use of a chronometer, made it impossible, by extended voyages, to acquire the wealth which these inventions made the heritage of the modern nations.

Had we the whole history of the Bank of Venice, suppressed in the end of last century by Napoleon, we might obtain the knowledge of transactions with sovereign princes during the

six hundred years of its existence somewhat akin to life annuities. When Edward I. and Edward III. engaged in their extensive wars with France, they undoubtedly received loans from that great bank, and it being impossible for *them* to bind posterity, the repayment must have been reckoned pretty much in the same way as by a life annuity.

Be that as it may, however, the new system was practically inaugurated by the scheme of the Italian Tonti, a native of Naples, who was the first that proposed what is called, after him, a tontine. The scheme could only be brought forward in such a condition of civilisation as afforded security for the preservation of the funds contributed during the whole period of existence of all the members of the society thus established, and that does not appear to have presented itself until about the middle of the seventeenth century. Then it was that the idea of, say, a thousand persons combining, and each paying into a common fund a fixed equal sum, presented itself, the interest of this sum being shared among the survivors, who became thus mutual insurers of each other.

We have only, in our conceptions of the procedure in the times of Israel and Babylon and, after a thousand or five hundred years of interval, of Rome, to suppose gold to take the place of payments in kind, in order to recognise the fact that what we call modern institutions practically existed in those comparatively remote times. If, in place of Parliament voting an annuity payable during the life of a royal princess, so long as she and her promised spouse shall live, and to the survivor of the union, there were a place assigned to both in an establishment where all that was needed was provided, as at the royal tables of David and Solomon, of Nebuchadnezzar and Evil-merodach, we could only say history repeats itself,—what is, has been.

A distinction, however, is to be drawn between the daily or hebdomadal donations of the wealthy senators of Rome to their clients in the *Sportula*. This was given for services to be rendered by the client to his patron, and could not be held

equivalent to a life annuity. Similarly, in the Middle Ages, when Guy, Earl of Warwick, the king-maker, entertained daily thirty thousand men at his table, these formed his retainers, and were thus receiving a portion of the wages which they were entitled to for the military service they rendered. The very condition of military service, as return for the holding of land under the feudal system, was of the same nature, only that the land held afforded the living which Warwick's men obtained at his table. We ought not to be misled by names and are only right when we follow the rule of Lucretius, content to call the sea *Neptune*, corn *Ceres*, and wine *Bacchus*; but not willing to admit that the first and third were gods, and the second a goddess.

“ Hic siquis mare Neptunum Cereremque vocare
Constituit fruges et Bacchi nomine abuti
Mavolt quam laticis proprium proferre vocamen
Concedamus ut hic terrarum dictitet orbem
Esse deum matrem, dum vera re tamen ipse
Religione animum turpi contingere parcat.”—*Luc.* ii. 652-7.

Let him who will, say, Neptune rules the Sea,
And Ceres reigns o'er fertile fields of Corn;
Bacchus the God of Wine be called,
And Mother of the gods the Earth;
But o'er his mind who thus descants
Let superstition have no power, and all be fancy held.

Therefore, although corn and baths were supplied gratis to the citizens of a mighty State, we are not to suppose there was any real difference between that condition of things and their receiving from the Government, through the medium of the Commissioners for the Reduction of the National Debt, life annuities payable half yearly, with a quarter's annuity payable after death. The only real distinction was and is, that the Roman citizens, in virtue of their ancestors' services, inherited their perpetual pensions, but in modern times this benefit has been restricted to the descendants of men who as leaders have rendered signal services to the State, such as Marlborough;

or whose ancestors have been nearly related to Royalty, as with the descendants of the second Charles.

Dismissing now these general considerations, it must be our task to trace the development of the system of life assurance in the form of money receipts and payments, inaugurated as we have stated by Tonti.

He conceived the idea of a number of individuals joining together, each paying in to a treasurer for the body a certain sum, the interest upon the whole to be divided among those surviving at the end of the year. In this manner, as the body year by year became less numerous, the survivors would receive an increase in the dividends as they grew older and the more in need of assistance. It did not seem to be contemplated what was to be done with the principal sum, which would remain locked up from all parties contributing, and eventually, on the failure of all the lives, go like any property for which no heirs could be found, into the hands of the Crown. This plan was therefore defective in not disposing of the principal sum among the subscribers; and to remedy this error, on the first occasion that it was put in practice, a certain number of years was named as the period for which the Tontine could continue, should the life of any member extend to the end of that period; and such a sum was named to be paid as at the rate of interest given would, at the termination of the period, amount to the capital sum subscribed.

Upon the death of any of the members their shares were divided among the rest surviving. In this manner the principal sum was divided, or attempted to be divided, among the shareholders of the Tontine.

It is to be observed that there was here no necessity for a knowledge of the average period of life of each individual, the scheme in its nature being altogether independent of any law of mortality, and varying its benefits to each individual precisely in proportion to the period of his surviving his fellows. There was thus no security that the provision would be at all adequate to the wants of the members, as in the event of the

lives of all being good, and the parties generally proving long-lived, the dividends would be very small; if the opposite, the dividends would be considerably enlarged.

Accordingly, it happened in the working out of the plan, that the greater number of individuals died without deriving any advantage from it, at all proportioned to what they had contemplated; while a very few who had survived to a long age were for some years before their death in the receipt of considerable incomes, far exceeding in one year all they had paid. A woman of the name of Barbier, a subscriber to the Tontines of 1689 and 1696, in France, possessed at the time of her death an annual revenue amounting to two hundred and forty-five times the sum she had subscribed; but she was the last survivor of her class. An advantage so distant and uncertain was not calculated to recommend itself to general approval; and the ardour for Tontines, which at the first broaching of the idea was considerable, became gradually and decidedly less as the working of the scheme exhibited itself in the small returns made, compared to those anticipated from it. In France and Holland the principal experiments of this nature took place, and in 1693, and at more recent periods, the Government of this country employed the Tontine system for the same object as the Continental Governments had done, and by its means raised considerable sums for the public service.

One decided advantage, and wholly un contemplated by the author of the scheme, followed from its adoption and working; that by means of it the only tables of the duration of human life, which could in any degree be relied upon, were furnished, the ages of the individuals upon their entering the Tontine and the ages at which they died being registered. These documents coming into the hands of scientific and inquiring men, suggested the idea of determining accurately the average duration of life of individuals of every age, and of calculating tables combining along with this the element of interest of money—in short, tables of life annuities—showing the value on an average of any annual sum enjoyed by an individual of

whatever age, at a fixed rate of increase by interest. By an easy transition it occurred, that as the value of all the payments to be made annually by any individual from the time of the first payment to the last—terminating with his life—might be calculated at the outset, and arithmetically expressed in pounds, shillings, and pence, a company or society might undertake, for that principal sum paid down, to grant him an annuity of a fixed amount, which might be preferred to the varying sums paid by the Tontine Society; and thus sprung up from the Tontine system the branch of Annuities, which, founded on correct theorems and statistical facts, and being fixed in its returns, became much more popular than the former, and not only in foreign countries, but also in our own, was extensively used by those who had the means of thus providing for the wants of life.

Still, neither the Tontine nor Annuity systems contemplated a provision for surviving relatives; all that was regarded was the party himself.

Here again, however, the natural development of science was exemplified in a new scheme, proceeding upon the fact, that as it was ascertained and admitted that a sum could be named equal to the present value of all the payments to be annually made or received by an individual during the whole course of his life; and as the average duration of that life could also be ascertained and specified in naming 20, 25, or so many years according to his then age; a sum could also be easily named to which the present value of the annuity, or these annual payments aforesaid, would accumulate and be equal to, at the end of 20, 25, or so many years—that is to say, at the death of the individual, taking his as an average life. Thus it was proved, that a company might safely guarantee that they would pay to his heirs or executors such a sum as before referred to, in consideration of receiving from him such annual payments as would accumulate and be equal to this sum at the termination of his life, holding that life to be an average one; and however much such a company might be deceived in dealing with *one*

individual who perished prematurely, and involved them in loss, yet if they made bargains of the same kind with 1000 or 10,000 individuals, they might rely with certainty upon the laws of nature regulating the duration of human life, as exemplified in masses of individuals, and might thus be as certain of performing their engagements as if each individual lived to the age they had calculated upon—and so it turned out.

Some individuals were thus induced to prefer dealing with a society which would guarantee a fixed sum payable at death; but in all cases the responsibility undertaken by the insurance companies that existed at the period was limited to a few years; and the premium was fixed upon arbitrary principles, without regard to any of the considerations which now rule similar transactions.

Notwithstanding the apparent truth of the conclusions on which the system rested, and the accuracy of the materials afforded by the results of the Tontines, so slowly does a system, however admirable and calculated for solid and substantial good, win public favour, compared to one that dazzles the eye by the illusion of immense and speedy advantages, that for many years the business of Life Assurance pined in a state of neglect, and was, in foreign countries, at the time of the issue of the first edition of this Handbook (1842), comparatively unknown. Its progress since, however, as we shall see more fully detailed in the sequel, has been considerable on the Continent, and especially in the United States of America.

It may almost be said, that until the arrival of Dutch William on our shores, this country scarcely knew that it was living, and the further accession of the Hanoverian family still more widely extended our practical knowledge of the ways and means of raising money for State national purposes. Hence the rise of such institutions as Tontines, the Bank of England, and the National Debt, otherwise called the Funds, and their accompaniment annual dividends raised by taxes on the people.

The Government of the day, in the third William's time, had the benefit of the researches of the celebrated John de Wit,

grand pensionary of Holland, to guide them in constituting the first Tontine scheme.

As far as appears, however, the Government seems to have had more in view the getting possession of the money than the arrangement of terms equitable for the State and those who advanced the money. It is not practicable to ascertain the actual rate per cent. per annum realised upon the Tontine of 1693, but there can be scarcely any doubt that fully 8 per cent. per annum was paid by the Government for the use of the money. Private mortgages and (in Scotland) wadsets (from *vas, vadis*, a pledge) bore, about the end of the seventeenth century, an interest of at least 6 per cent. per annum.

The Government ought to have been able to raise the money at 6 per cent., but the necessities of the hour prevailed over economical plans, and the money was gladly received at the higher rate.

John de Wit's calculations bring out the mean duration at the age of three, that assumed at entry, as $52\frac{1}{2}$ years, which agrees with the result of the Government Annuity Tables, female life (my work, Groombridge & Sons, London, 1859). The grand pensionary was probably aware that the female life was better than male, and thus based his calculations on female life, acting for the interest of the State.

Had the Government therefore strictly acted on De Wit's basis, they would have been able to avoid any loss upon the scheme, because males as well as females were included, and upon the former a profit corresponding to the difference of longevity, equal to about 7 per cent. (*less* the *male* than the female longevity) would have been realised.

It is unnecessary to follow the after schemes pursued by the Government during the eighteenth century, as the adage fully applies "*Ex uno disce omnes*," the Tontine nominees of the first scheme having long ago died out, and having thus furnished the perfect evidence of the mean duration of life, so far as could be obtained from a limited number. As for the scheme started in the beginning of the nineteenth century, the

Sinking Fund Annuitants, although it is the foundation of the new tables issued by the Government, after fifty-five years perseverance in a wrong direction, it is unnecessary to say much. The old story of Cræsus, King of Lydia, and Solon applies here, that the full life constitutes the right basis for forming a sound judgment of the average length of life.

John Finlaison combined the experience of the scheme of 1808, up to 1823, with that of the Great English Tontine of 1780, and of the three Irish Tontines of 1773, 1775, and 1778. The survivors in 1823 of those who had entered the Sinking Fund of 1808 (in each year up to 1823), formed the great majority of those whom he thus dealt with. He *knowingly* and necessarily thus derived a high average mean duration of life, much above what would have resulted had the surviving annuitants of 1823 been all followed to the close of their respective lives. It is a fact proved by experience, that for a few years following date of entry, the mortality of annuitant and of assured lives is very light. Mr Finlaison's intentions were undoubtedly good, acting as he did, under an overwhelming sense of the loss being suffered by the Government from the continued use of the Northampton Table, at 4 per cent. interest (allowed to annuitant in calculation of annuity), and without distinction of price of annuities, whether the annuitants were males or females. The *remedy* was what he sought, and *not* the ascertainment of the true length of annuitant life. Having thus, by his New Tables, calculated at rates of interest varying inversely according to rates of price yielded by the Funds, with distinct prices for annuities on male life, and on female life, delivered the Government in 1829 from the false position it had occupied for fourteen years from 1815, a new danger presented itself to Mr Finlaison.

It is shown, in the general preface to my work before referred to, of the British Government Life Annuity Commutation Tables, that the real duration of life, as between the two sexes, was known to a select few so far back as forty years antecedent to 1823; and that it had been taken advantage of,

in 1789, in connection with the Great English Tontine of that year, to subject the Government to loss. The fact already stated, as to the coincidence of John de Wit's calculation of the average duration of life at the age of three with the result of the British Government's whole experience up to 1825, in female life, points to the inference that the truth was known to De Wit, and probably to a few others equally advanced in knowledge, even at the time he wrote—that is, in 1671, or 215 years ago. It can be scarcely a matter of surprise, therefore, that speculators existed in 1830 capable of testing the New Tables of John Finlaison, and of finding out their weakest point, to be turned to their own advantage. The result was the speculative purchase, by half a dozen life assurance companies and a bank, of annuities on the lives of 675 old males, ending in a loss to the Government of at least one million sterling. That this is no exaggeration may be inferred from the fact, that the cancelling of the transactions in *one* of these purchases, the life being that of a member of the Society of Friends of the name of Chalk, involved the repayment by the offices to the late First Lord of the Treasury, the Earl of Idlesleigh, then Chancellor of the Exchequer, of no less a sum than £120,000, as the balance of the purchase price on the one hand, and of the instalments of annuities paid, on the other hand, both accumulated at 4 per cent. compound interest. The transaction was of course not an average one, the annuities purchased on Chalk's life being several, and of large annual amount, which was fortunate (not being an average), for *that* would have meant a loss to the Government of many millions sterling in place of one million. The exact amount of the loss, however, from official sources, has never been communicated to the public.

The possibility of future loss, from speculative purchases of life annuities, has been prevented, as far as possible, by the regulation that the Commissioners of the National Debt will not grant any annuity upon the continuance of the life of any nominee unless the nominee shall have, *bond fide*, a

beneficial interest in such annuity. This regulation existed as far back as 1840, but was then limited to nominees above the age of sixty-five.

The dread caused by such operations has been productive of evil consequences.

In 1860 the experience of the Government in Life Annuities was brought down to 1853 by the late able Actuary of the National Debt, Mr Alexander Glen Finlaison, who still survives, to the gratification of all who know him. It was patent from his Report, that females were certainly overcharged on the prices of their annuities, but possibly, from fears caused by what had happened, no alteration was made, and I have roughly calculated the loss to females purchasing from the National Debt Office as amounting to three and three quarters millions sterling, at an epoch of a few years ago. This should not have been, although no doubt it has considerably reduced the loss on male life sustained by the Government. It has also brought about the result of no loss being suffered since 1830, thus recouping the loss on the 675 old males, and the further loss from selling life annuities to males too cheap, up to April 1884, when the change was made, after about fifty-five years' perseverance on the basis of the tables of 1830.

If it could be said that the basis, as now established, is a right basis, there might be satisfaction at last. But unfortunately this is not the case. The Sinking Fund Annuitants Scheme of 1808 has been taken as the sole basis of the New Tables of Life Annuities for the National Debt Office and for the Savings Banks. This experience shows 25 per cent. of the annuitants surviving at the close of the observation, in 1875, and thus the value of the annuities is enhanced above the true value. Further, by the introduction of the 675 old selected males, the male class has been still further unduly raised in price of annuities, seeing that such a transaction as the admission of that class is now impracticable. Finally, a new mode of calculation for the first four years of the course of the whole annuitants has been introduced; objectionable both

from the smallness of the numbers that could be made use of during that period, and from the fact of only three-fourths of the whole number of lives having completed their full term. Speaking generally, the life annuities are thus enhanced—the females, a half year's purchase; the males, three-quarters of a year's purchase, above the just value by the Government's whole experience. This may serve an object, in preventing (by the purchasers being mulct in about 10 per cent. of their annuities) the holders of the national debt from converting their stock into life annuities, and thus advance the purpose of those who proposed and carried out the Act for the scheme of paying off one hundred and seventy millions of the national debt in twenty-four years or thereby. But it is inequitable and unjust, since it violates the principle on which the Sinking Fund Annuitants Scheme of 1808 was constituted; which is to give the fund-holder the opportunity, if he so desire, of converting his perpetual dividend into a life annuity, on *equitable* terms. For the violation of this principle the Government of the day are responsible.

The Sinking Fund Annuitants Scheme not now serving the purpose for which it was instituted, there seems no proper ground for continuing its operations, and the period is thus evidently arrived at for terminating its existence, except for the time required for winding up. If the Government desire its continuance on account of the profit it affords, the hope is delusive, for the general intelligence on the subject is too advanced for many people to prize the Government security so much as to pay the National Debt Office 5 per cent. above the purchase price for a life annuity charged by a respectable life assurance company. It is, however, to be considered that the influence of the Government is so powerful in the way of example to insurance offices that there are comparatively few of the offices which do not follow the Government lead, in the terms of purchase prices of life annuities.

The Manchester Corporation, in their Waterworks Committee's Life Annuity Scheme, carried on since 1859 up to 1882,

twenty-three years, on the basis of the tables in my work of the Government Annuity Tables (being the whole Government experience up to 1825), and since on the varying basis of the tables of the National Debt Office, have experienced the natural effect, in an equal competition, of the shrinking of their life annuity business to a third of its former proportions.

While it is impossible to predict the future course of the business of the National Debt Office in life annuities, it is evident from the statements in the Actuary's Report of 1883, printed 1884, that a considerable reduction has taken place in the number of annual purchases of life annuities at the National Debt Office.

We will now resume the narrative of the progress of Life Assurance, having extended the information on life annuities to the present time, for the purpose of giving a complete elucidation, so far as our compass allows, of the course of the life annuities business, earlier in date than Life Assurance.

The first life assurance company established in this country was the "Amicable," in the year 1706. In its origin, however, it was altogether upon the Tontine system, one uniform rate of contribution, irrespective of age, being exacted from members, and the benefit in the same being returned annually according to the state of its funds, the whole being divided among the heirs of those dying in that year. The amount thus receivable fluctuated according to the number who happened to die, in an inverse proportion: if few died, the dividend was large; if many died, it was small. Seeing the inequitable results, the Society, at two subsequent periods (in respect of annual contribution of £5 for each member), guaranteed not less than £125, and then not less than £150 as the dividend. At a very recent period was the modification introduced which constituted it an assurance society, substituting for the annual payment of £5 for each year the proper premium corresponding to the age of the member entering the society, and otherwise also on the same basis with other Life Assurance societies. In 1866 an Act of Parliament was obtained uniting the Amicable Society with the Norwich Union Life Assurance Society. The funds

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of the Amicable are kept separate in the Returns, and the business is being gradually decreased in the process of winding up, no new policies connected with the Amicable being issued. From comparison of amount of funds in 1871 and 1883, it appears that ten or twelve years from the latter date will bring the Amicable business to a conclusion, after an existence of nearly 200 years.

"The Society for granting Equitable Assurances on Lives and Survivorships" was originated in 1762 on a better basis, the benefits being fixed, and the premiums adjusted to the age of the member at entrance, according to the best experience of human life to be had at that epoch. It was in consequence of the lectures of Mr Simpson, delivered in London to numerous respectable and attentive audiences, which made a powerful impression, that this Society commenced business. Although comparatively little was done during the first ten or fifteen years of its existence, yet from and after 1777 the Society made amazing progress, and its funds in 1800 amounted to about three quarters of a million sterling. It owed its success mainly to the researches of Dr Price, and to his work on Reversionary Payments, &c., published in 1769, in which, and in subsequent editions, he brought the Society fully under public notice, and referred in commendatory terms to the work of Mr Morgan, the actuary of the Society (who was nephew to Dr Price), "Doctrine of Annuities and Assurances on Lives and Survivorships," published 1779. Dr Price, though professionally a minister of the Independent body, now known as the Congregational Church, and thus attached to sacred subjects, had applied his comprehensive mind to the investigation of political and mathematical science, and particularly to the latter as combined with Life Assurance. In his researches he had felt the want of a table of mortality that would more accurately represent the value of human life than the then existing tables, the most trusted of which was calculated from the London Bills of Mortality. This he considered that he had found in the Register of Births and Deaths kept at North-

ampton, which he held to be a true representation of the state of human life in this country at the time, and this he published and applied in the form of tables of single life and of two joint-lives, showing the values of annuities in the latter in combinations for each difference of age at intervals of five years, and at 3, 4, 5 and 6 per cent. interest per annum. These were included in his work, and were adopted by the Equitable Society, which had, during the early years of its existence, acted on the London Bills of Mortality.

The well-earned reputation of Dr Price, for accurate information in all that pertained to Life Assurance, being thus transferred to the credit of a Society which really deserved his commendations, and at a time when there was hardly another that could at all compete in equity of principles, it is easy to account for the great flow of prosperity which was, from that time, experienced by the Society. To such an extent did this continue that in 1810, at the decennial division of profits, it was thought necessary by its actuary to caution the Society against the evil effect of more admissions; and in 1816 they resolved, in order to put a stop to an increase which they considered likely to be attended with dangerous consequences, to exclude all future entrants from any share of profits until the total number of assurers with the Society should be reduced to 5000; and this has effectually checked the rapid increase from which danger was apprehended, while it has not, in the smallest degree, detracted from the capability of the Society to perform all its engagements. The business of the Society since, however, has been much reduced. Its funds appear, at 31st December 1855, to have amounted to seven millions sterling; but at 31st December 1883, only amounted to about four and a quarter millions sterling. The cause is not altogether due to the resolution of 1816, because the number of the assured being now below 5000, the new entrants immediately share in the profits. But the Northampton Table has been challenged, as not being an accurate representation of the real value of human life, which is a proposition that can scarcely

be disputed. The late eminent Dr Farr stated, further, that it never represented the real rate of mortality experienced at Northampton during the period of observation. The Equitable Society has also shut itself out from the advantage obtained by employing or by giving commission to agents, for business brought to the office, and has avoided advertising its claims to public patronage, beyond the circulation of its own printed statements. In this year (1886), however, has appeared an advertisement of its Bonus Table for 1886. The late Professor De Morgan charged the Society with being *over-cautious*, and whatever be the cause, the decline of its business is a fact that admits of no question. It has, however, rendered essential service to the cause of Life Assurance, during its long, and for a considerable period, splendid career.

Partly induced by the success of the Equitable, ten new life offices commenced business, two in the last decade of the preceding, and eight in the first decade of the present century, all presently existing. Eight of these were mixed offices—that is, proprietary, but offering participation in the profits to those assuring; while two were mutual—that is, without paid up capital, and giving the whole profits to the members assured on the profit scale. Four of them combined Fire Insurance business with Life Assurance. While all have done well, the London Life Association, a mutual society, appears to have been the most successful, looking to the amount of funds accumulated. These offices have all advertised the benefits of their respective modes of assurance, which appears a very proper way of acquainting the public of the advantages offered. In the case of the offices possessed of capital, it was pointed out that this not only furnished a security which mutual offices did not possess, but in addition, enabled the office to divide the *whole* accrued profits; whereas, in mutual societies, a considerable proportion of the profits, extending in some to a third, was then in use to be reserved for security at each division. It was also urged that the amount of their paid-up and subscribed capital, being pledged to the fulfilment of their

engagements, every farthing of that fund must be expended before the fund arising from the contributions of the assured could be at all affected. The mutual offices pointed to their small expenses of management,—3 per cent. in one case on annual income from premiums and interest,—and of course relied on the fact of the whole profits being divided among the assured. As regards this latter advantage, however, one at least of the mixed offices also gives to the assured the benefit of the whole profits, less a small commission for management. One mutual office states that it employs no agents, and pays no commission on the introduction of policies. In a tabular statement at the end of this work all the particulars of information that appear to be useful for the public to know, so far as can be obtained from returns by the offices to the Board of Trade, or from answers given to special questions sent them, are given. It is thus unnecessary to enter into any further general remarks. These offices for the most part founded their premiums on the Northampton Table, but in their later investigations have fixed their reserves, meaning thereby the value of the policies calculated upon the *net* premiums (without any addition for management or for profit) by valuation according to tables recognised as approaching more nearly to the real mortality experienced, such as the Carlisle Table, the Equitable Experience, the Experience of the Government Male Annuitants, or a partial combination of these, or finally the Experience of the Institute of Actuaries, about which tables, especially the latter, remarks will be made by way of explanation and illustration in a subsequent chapter, and partly in the sequel of this.

In 1816 a decided change occurred in the business of Life Assurance. In that year, as we have observed, the Equitable Office all but shut its doors against the admission of more members ; and in 1815, the Carlisle Tables had been published, exhibiting a much less degree of mortality than shown by those of the Northampton ; and these later tables, more especially after the publication of the Equitable Experience in 1834, which

confirmed the soundness of the Carlisle Table, were adopted by many companies as the basis of their transactions. Thus a considerable portion of the business of Life Assurance now began to flow in other channels than heretofore, and to be regulated in a different manner. So much was this the case that companies founded upon the basis of the Northampton Tables, and continuing the use of these, were obliged to grant a higher rate of interest in the calculation of their rates than the Equitable and old companies had done; thus bringing their terms to approximate to those of the Carlisle Tables. These tables being published by the eminent actuary, Mr Joshua Milne, who compiled them, in a full and lengthened treatise upon the subject of Life Assurance, undoubtedly contributed to diffuse the knowledge of the system, and to induce many to make practical use of it, who otherwise might have neglected its advantages. Coupled with the work of Mr Baily upon Life Annuities and Assurances published some years previously, it formed a complete code and index of the system, which now took rank as based upon tables much improved in their approximation to the real duration of human life, and regulated in its application by strict mathematical principles.

Following on the publication of the Carlisle Tables, and before that of the Equitable Experience, came in 1829 the Observations compiled by Mr John Finlaison, of the British Government Annuitants' Experience, in five separate divisions, the first commencing in 1693, and the last in 1808. There is no doubt of the accuracy of these Observations as regards all essential circumstances, the only point on which a question for opinion arises being, whether the old Observations do not represent a rate of mortality exceeding what now prevails. The Observations were continued by Mr John Finlaison's son, Mr Alexander Glen Finlaison, who succeeded him as Actuary of the National Debt, and were published in 1860; and the present actuary, *Mr Alexander John Finlaison*, has brought further down the Observation which commenced in 1808, to 1875, and formed new life annuity tables for the Government on

that Observation alone, superseding in 1884 the tables in use for fifty-five years, which were founded on three of the five original Observations by Mr John Finlaison. One thing is evident, that in proportion to the oldness of the Observation the value, on the average, of human life decreases. Thus the value of the Sinking Fund Male and Female Annuities, brought out by Mr John Finlaison in 1825, is diminished $11\frac{1}{2}$ per cent. in the values brought out by Mr Alexander John Finlaison in 1875. If human life has improved during the last half century, this result is intensified, for it demonstrates the possibility of getting a high value for human life, even at an early stage, which subsequent experience, notwithstanding improvement, shows to be fallacious. At the close in 1875 above a fourth of the annuitants were alive, which leaves the inference that a further continuance of the Observation would have still further increased the difference from the result of the Observation made in 1825.

The experience of the seventeen offices in assured life and that of the twenty offices which has been published under the name of the Experience of the Institute of Actuaries, is of a similar description with that of the Government Annuitants, a considerable number of the assured being alive at the close of the Observation. Two sets of Observations have, however, in the latter case been formed, the one embracing all the entrants, the other excluding the first five years from the date of entrance. This it is thought will balance the effect of having a large percentage of the assured alive at the close of the Observation. The conclusion forced on the mind, however, is, that to give an Observation the whole weight to which it is entitled, the entire lives from commencement to close of life should be observed. Then the different results arising from varying periods of observation would disappear, and the mortality would vary simply according to the particular class under observation. The mortality could thus be compared of the residents in a large manufacturing town with that of those residing in a country district.

Between 1811 and 1815 only one office commenced Life

Assurances. From 1816 to 1842 forty-three offices commenced Life Assurance business, being at the rate of three offices every two years, who are all in existence at the present time (1886). Peculiar advantages were offered, and the spirit of competition tended to diffuse the knowledge of the system, from the widely circulated advertisements of the offices; and new and improved ways of insurance were also brought forward, and thus the public reaped the advantage in more moderate rates of premiums, and in more advantageous modes of insurance.

From 1842 to 1866 thirty-five life offices have been established, or about four offices in each period of five years, all continuing in operation at the present time.

From 1866 to 1886 only seven offices appear to have been established, a paucity in proportion which may be partly owing to the large number in possession of the field, and to the operation of "The Life Assurance Companies Act, 1870."

The total number of Life Assurance offices in the Returns to the Board of Trade, dated 17th July 1885, amount to 108; but the actual number in operation as offices doing business at present cannot be reckoned as equal to that number, some existing only from their being in the condition of being wound up, either totally or in reference to Life Assurance business, carrying on their other business.

In fact, the *number* of offices really doing business does not appear much to exceed that of those given in the first edition of this work, published in 1842, which is eighty.

Of these offices in existence in 1842, thirty-two have either become extinct, been transferred to, or have amalgamated with other offices, or are being wound up.

Of the mixed offices, the most considerable division, 42 per cent. have thus ceased.

Of the mutual offices 8 per cent. have thus ceased, *i.e.*, only one out of thirteen, and that from being amalgamated (Amicable, 1706) with another mutual office.

Of purely proprietary offices there are now *none*. Of nine existing in 1842, two subsist as mixed offices.

It thus appears that the mutual offices have by far the advantage in point of vitality.

At same time, numbering as they do, only about one-fourth of the mixed offices, it is proof of the difficulty of establishing a mutual office. Four at least of the mixed offices have, during the period since 1842, been converted into mutual offices.

As regards the amount of business transacted, compared to what was done in 1842, it is difficult to form an estimate. One of the principal mutual offices has increased its accumulated fund nearly eight times during the interval up to 1886. The estimated number of policies existing in 1842 was 200,000. The amount insured, on average, on each policy being taken as £638 (arrived at by taking forty English and Scottish offices), 134 millions sterling would be about amount then insured. In 1849 the late Mr W. T. Thomson, of the Standard Life, states amount insured with English offices as 150 millions, and with Scottish offices in 1852, as 34 millions. Taking ten millions off latter as estimated for the three years preceding, the united amount, as in 1849, will stand at 174 millions. Mr Thomson estimates that in 1856 the amount did not fall short of 200 millions. This seems an under statement, however, if the amounts in 1849 and 1842 are correct. The amount of premiums paid in 1884 by the Board of Trade Report, being £12,307,152, this, on an average, would indicate 350 millions as amount then insured. The adding together of the amounts insured with profit in Mr White's Register for 1886, checked with Board of Trade Returns when necessary, with additions for policies without profits, grounded on state of three of the largest offices, gives about the same amount. The bonuses being added, and taking these at 50 millions, the total amounts to 400 millions sterling. The number of policies appears to be about 650,000, and the average held, with bonus, on each policy thus amounts to about £615. The periods in the Returns range from 1871 to 1885, and holding medium period as 1878, seven years' transactions would have to be added to bring up to 1885. The transactions for 1885

would add about 30 millions sterling and upwards to the amount insured, and putting average for seven years, less claims and surrenders, &c., at a third of that amount, 70 millions would require to be added to bring up the total to the end of 1885, making 470 millions sterling in all insured on human life by the British companies.

This is a very large amount. To find anything similar approaching it, we must refer to the Report of the Insurance Department, State of New York, for 1885. That shows, as at 31st December 1884, for twelve life offices transacting business in that State, and other seventeen Life Insurance companies of other States included, a total of 390 millions sterling insured, represented by 750,567 policies, making an average of about £515 per policy, or about £100 less than ours. The oldest of these offices, the Mutual Life Insurance Company of New York, commenced business on February 1, 1843. This is certainly progress, and in the eloquent words of the Superintendent reporting, "presents a monument of that progress that will endure with time, has strength enough from foundation to cap-stone to resist all efforts to deface it, and will last when men pass away." It must be granted that this country has led the way, and been the model on which the Americans have reared the structure of which they are deservedly proud.

The improvements made in the practice of Life Assurance business are mainly embraced in a system which permits the commutation of a policy payable during life by annual premiums, into a paid-up policy of the amount corresponding to the actuarial value of the existing policy.

In one office at least this system is extended to every policy. In the general case the privilege is limited to the class of policies, the value of which is paid up during a fixed number of years from commencement, such as ten, fifteen, or twenty years, or when the policy combines an endowment—that is, is payable on attaining a certain fixed age, or at death previously.

The improvements in making the payments to increase during a series of quinquennial periods, or to decrease during these periods, which were available up to 1842, are still continued. This suits two different cases—first, when the party assured is in possession of a large present income, which he cannot expect to continue for life; second, when the insurer expects that his income will increase with prolongation of his life. In the decreasing scale, the individual, by making comparatively large present annual payments, causes the future expense in premiums to sink to a light burden upon him for the rest of his life. On the other hand, the insurer, by payment of a comparatively trifling sum, can secure a large benefit, should he die in a few years, provided he be willing and able to increase the rate of his payments, should he survive, and thus reimburse the office for the abatements formerly given.

There is also the half premium system, by which for a fixed number of years, generally five, the insurer is allowed to retain the half of the premium, on which he is charged interest during his life; or if he chooses not to pay up the loan, the principal being deducted from the policy when it becomes a claim from the death of the party assured.

The income in premiums of the various Life Assurance companies in the kingdom has been referred to, and the amount of funds accumulated by them, as in Report to Board of Trade issued 1885, is £135,604,632; while the capital of the proprietary and mixed offices is, in addition, £11,369,659; together, £148,974,291. This amount is liable also for the fire risks, so far as it is capital, and for life annuities granted, as regards the sum total. The life annuity business embraces the annual payment of the sum of £593,151, which indicates the total amount of these annuities as being between five and six millions sterling, as regards capital invested therein.

It may be inquired, is it certain that funds, amounting to about 150 millions sterling, are sufficient to meet liabilities amounting to 475 millions sterling (putting fire losses out of account, which claim only against the capital).

Besides the consideration of strict valuation, on basis of good tables, we have the case of America to compare with ours. As we have seen in State of New York and offices of other States doing business there, the policies amount to 390 millions sterling of sums assured and bonuses, and the accumulated funds or assets amount to 101 millions sterling. On that footing, how much amount of funds ought the British offices, having liabilities to the amount of 470 millions, to possess? The answer is, $132\frac{1}{2}$ millions sterling. But the British offices hold nearly 150 millions of funds. It may be said that the Americans, giving $4\frac{1}{2}$ per cent. interest in calculating premiums, and realising about $5\frac{1}{2}$ per cent. on investment, are in a different position from us, who only allow 3 per cent. and realise about $4\frac{1}{2}$.

A sum of £100 being held as due twenty-five years hence, the Americans would at end of that period have a larger amount to meet the claim than the English offices. Thus the American offices could do with a less amount of reserve; or what is equivalent, the British offices must retain a larger reserve. But it is so in reality, as above, the British offices holding 11 per cent. more than the American offices. Taking a period of twenty-five years, the difference in favour of the American offices between rate of interest allowed and rate realised, is 1 per cent. The British offices make, between the rate of interest allowed and that realised, $1\frac{1}{2}$ per cent. Thus, on accumulation from investment of £100, the American offices increases this to £128, and the British £145, a difference in favour of the British offices of 13 per cent. Thus the latter appears to be abundantly secure, provided that they observe the above golden mean between what rate they allow and what rate they realise.

It has been suggested of late years that there should be, in addition to the means afforded by the life offices, a National Scheme of Life Assurance, and compulsory; but the committee to whom it was referred last session, after having heard evidence, has reported against the scheme. The compulsory

system of insurance for the German Empire, as regards its working classes, took effect on December 1, 1884.

In this country compulsory education and compulsory vaccination have encountered difficulties and obstacles. In Germany the military system, which has existed since 1807 as regards Prussia, has accustomed the people to regulations which press heavily on the community, but are upheld and defended on the grounds of national security. It does not appear at present, that there is any prospect of the example of Germany being followed in compulsory insurance. It is well, however, that a trial should be made, which will be of use to other nations in reference to the subject, the importance of which this country, which has done the most for the voluntary system of Life Assurance, would be the last to undervalue.

CHAPTER SECOND.

STATISTICS OF LIFE ASSURANCE, WITH AN EXPLANATION OF THE
TABLES UPON WHICH THE SYSTEM IS FOUNDED.

ANCIENT nations have, through the persistent labours and researches of modern explorers, given up their hitherto buried records of learning and knowledge—witness Egypt, Babylon, Assyria, and Greece; and only last year, by the discovery of a vault with tombs in Rome, we have had the tragedy of the public assassination of the Emperor Galba, and of his chosen colleague in the empire, Piso, brought almost before our eyes, in the inscriptions engraved upon the tombs. One especially interesting portion of the revelation is, that an ancestor of Piso, who, by his mother's side, was descended from the great Pompey, the son-in-law and victim of the greater Julius, had lived to the age of 93, and had thus outlived all the senators that were alive when he was consul. In the House of Lords, at present, there is no peer so old as 93, but there are two peers, each aged 92.

Are we not, in the above, hearing a story as fitly applicable to the House of Lords of the present day as to the Senate of ancient Rome? and is not this one of the many evidences that human life, regarded in the aspect of a particular class having a kindred relationship, such as the Roman and the British senates, has not materially varied in its duration during the whole period of nearly two thousand years, between the Senate of Augustus and the Senate of Victoria?

As regards the duration of human life, the references scattered throughout the sacred Scriptures, from the time of

Eli, B.C. 1141, and also throughout the classical authors, point distinctly to individuals having, in the times to which the notices refer, reached the extreme ages which are sometimes reached in the present times. The statement in 2 Chronicles xxiv. 15, and in Isaiah lxv. 20, evidently indicate the occasional survival in the latter's time, B.C. 760, of men to the age of 100 years and above it.

Whoever wrote the book ascribed to Tacitus, "*De oratoribus*," makes it evident that, in Southern Britain, contemporary with Julius Cæsar, B.C. 50, there were men who attained to 100 years and upwards.

We have seen in our own time the age of 100 years completed by the late Sir M. Montefiore. Six Government annuitants, three males and three females, have passed their hundredth year.

As regards general comparison, take all the kings of Judah, from David, B.C. 1055, to Jehoiachin, B.C. 597, a period of 458 years, we have eighteen kings whose reign is, on the average, 26 years.

Take the kings of England from 1066 to 1422, 356 years, fourteen kings, the average reign is 25 years. Leaving out those in both sets who did not die a natural death, four in the first and three in the second, the average is respectively 27 years and 26 years.

Although separated, the groups by an interval taking the middle term of each group, of above 2000 years, they correspond in the average to within one year.

The emperors of Germany, also after referred to, present an approach almost as near to these ancient kings of Judah; and as the comparisons are between life in Asia and life in Europe, the agreement is what may be called remarkable, were the fact otherwise than that the life of man on the average does not vary, at least, has not varied during the past 3000 years.

It may be thought that the kings of France, also after referred to, are not in harmony, either in the ancient or modern group, the average being respectively 18 years and

21 years. We only require, for a thorough comparison with the ancient kings of Judah, to take the whole range from Pepin (le Bref), son of Charles Martel, to Louis XIV., 752 to 1715, 963 years, forty-two kings (leaving out Louis V., the "fainéant" king of one year), and the average is 23 years, the Jewish average being 26 years, the interval between the two groups exceeding 2000 years.

Take the Popes, fourteen in number in each case, that reigned from the year 865, and from the year 1378, and you find the average reign in each set 15 years in endurance.

Take the kings of France to the number of thirteen, who reigned from the year 752, and from the year 1364, the average reign of the more ancient selection is 18 years, and of the modern 21 years. Amalgamating with the Popes, the average of the elder sovereigns is 17 years, and of the younger 18 years. The two sets are separated, the one from the other, by the space of five centuries. The short average of the Popes is accounted for by their being generally old men before being elected.

Taking the emperors of Germany, eighteen in number in each group, from the year 936 to 1298, and from 1298 to 1705, the average of the first set in length of reign is 20 years, and of the second set 23 years; difference 3 years.

Taking the kings of England in two groups of fourteen each, from 1066 to 1422, and from 1422 to 1727 respectively, the elder group's average is 25 years, the younger 23 years. Here the fact is to be noticed that the elder group is superior in vitality.

Amalgamating the four more ancient sets and the four more modern sets, we have as average 19 years for the former, and 20 years for the latter; difference 1 year.

The special results, as well as the general, support the view that there has been no material change on the average of human life during an experience of nearly 3000 years.

We shall now state what has been done in the way of ascertaining, by the modern system of registration, the rate of

mortality in this country during the period from 1693 to the present time.

The basis of all the early calculations connected with the business of Annuities and Life Assurance is the Parish Register or Bills of Mortality. The observations, therefore, from which the tables formerly in general use were compiled, being local, were objectionable, as the vitality of the population of a whole country can hardly be measured by that of a district.

The first table published in England was, as we have before stated, that of Dr Price, formed from observation of the mortality in Northampton. It is scarcely necessary, from the use of this table having been now almost wholly abandoned, to give details regarding it. The late Dr Farr, of the General Registration Office, has given the results derived from the Census of 1841, and the numbers living and dying at Northampton, and also the results derived from the deaths alone during same period,—the latter agreeing pretty nearly with Dr Price's tables, and differing from the former by bringing out a less mean duration (or after lifetime) of about 20 per cent. for ages between 0 and 60.

Dr Farr comes to the conclusion that Dr Price's table is erroneous to an extent which deprives it of all value. It is to be observed, however, that at age 60 the difference between the two tables is only $2\frac{1}{2}$ per cent., while the real Northampton Table of Dr Price is, at that age, $7\frac{1}{2}$ per cent. *above* the true Northampton Table of Dr Farr. At age 40, however, the difference is $11\frac{1}{2}$ per cent., and the real Northampton Table of Dr Price is 10 per cent. *below* the true Northampton Table of Dr Farr, the percentage differences increasing rapidly as the age diminishes.

As the late Mr W. T. Thomson justly remarks, grounding on the close resemblance of Dr Farr's false Northampton Table to the real Northampton Table of Dr Price, the value of life in this country has not materially improved during the present century. This is a conclusion which is also deducible from

the Carlisle Table, compared with modern observations, and from the Government Tontine of 1789, contrasted with the Government Annuity scheme of 1808.

While the Northampton has been of much use in the past, it may as regards the future be almost altogether left out of consideration. It was remarked in the 1st edition of this little work that the Northampton Tables required to be altered by the offices that used them, so as to suit the actual rate of mortality prevailing.

The Carlisle Table, formed by Mr Joshua Milne from Dr Heysham's observations at Carlisle, during the years 1779 to 1787, embraces 1840 deaths, at all ages, and may be held to approximate much more closely to the truth. The limit of existence, as deduced from these observations, is represented as 104 years.

The objection that the results are derived from the mortality of a particular town ; also from a small number, comparatively and lastly, during a short period, would appear to be formidable. From the circumstance, however, of the judicious treatment of the observations by Mr Milne, and from the close resemblance that the Equitable Society's Experience published by the Society in 1834, and for the period from its institution 1762 down to 1829, bore to the Carlisle Table, the latter has been held to represent very nearly the average of healthy life in England at the present day.

Two very different principles were followed in the construction of the Northampton and Carlisle Tables. In the former the data are the actual deaths which happened amongst the floating population of a district, as recorded in the bills, without allowance for immigration. The conclusions of Heysham, on the other hand, were drawn from the observed deaths among a stated number of individuals as they occurred at each year of life.

In 1829 the observations of the mortality found to prevail among the Government Tontine Nominees and Annuitants were published. "These comprehend individuals," to use the

words of Mr John Finlaison, their compiler, "only among the higher and more influential members of society, composing in fact that vast majority of those who have any concern with pecuniary transactions depending upon the tenure of life."¹ The total number of male lives involved is 4870; of females, 5270. The period during which the mortality took place was from 1693 to 1825, but nine-tenths of the whole were subsequent to 1746.

In 1860, Mr Finlaison's son, Mr Alexander Glen Finlaison, then actuary of the National Debt, brought down the observations to 1856, by which the number of male lives involved was increased to 9938, of female lives to 12,894.

By the above and preceding statements, the number of deaths is meant.

The tables Mr Alexander Glen Finlaison submitted to the Government as the best representation of the value of annuitant life were made up of the Irish Tontines, the English Tontine, and the Sinking Fund Life Annuitants, extending in all from 1773 to 1850, but were not adopted, probably owing to his own suggestion, that a further observation of 30 years might restore the female life to the high value indicated by the previous observations, *i.e.*, Mr John Finlaison's selection for the Government use, which left out the two first observations of 1522 males and 2032 females, all of whom were observed up to death, excepting 36 males and 120 females, both belonging to the second observation. In 1883 the Government Actuary of the day, Mr Alexander John Finlaison, brought down to 1875 the last of these, *viz.*, the Sinking Fund Annuitants, and upon that observation alone, extending from 1808 to 1875, the tables which the Government adopted in 1884 for the future, for use at the National Debt Office and at the Savings Banks, are based.

The number of male lives involved in these is 8607, and of female lives 14,391, meaning the number of deaths.

¹ Report, p. 15.

The value of the observations of the Government, as a whole, has not been disputed.

It has been observed by Dr Southwood Smith, that from these Government observations it appears that there are certain fixed periods, marked by nature as epochs of human life ; that is to say, the rates of mortality of the infant, the child, the boy, the adolescent, the man, the old man, are determined, and distinct from each other. At the termination of the period of childhood, thirteen or fourteen, the rate of mortality falls to a minimum ; from this period the ratio rises until the termination of adolescence ; from that period it again declines, and continues to decline to the period of perfect maturity ; thence it becomes greater, and uniformly returns at the age of forty-eight to the point at which it stood at twenty-three.¹ From the termination of infancy, at three years of age, a decade of years brings childhood to a close, during which the mortality steadily decreasing, comes to its minimum ; another decade terminates the period of adolescence, during which the mortality as steadily advances ; a third decade changes the young adult into a perfect man, and during this period, the golden decade of human life, the mortality again diminishes ; while, during another decade and a half, the mortality slowly rises, and returns at the close of this period to the precise point at which it stood at adult age. Thus the interval between the period of birth and that of adult age includes a term of twenty-three years ; the interval between the period of adult age and that when life just begins to decline from its meridian, includes a term of twenty-four years, consequently a period more than equal to all the other epochs of life from birth to adult age is enjoyed, during which mortality makes no advance whatever. Now, the term of years included in the several epochs that intervene between birth and adult age, is rigidly fixed. Thus, the period of

¹ The Sinking Fund Annuitants, only at the age of 41 in males and 35 in females, begin to show a number exposed to risk of above 500. To these tables Dr Southwood Smith's remarks do not apply.

infancy includes precisely three years, that of childhood ten years, and that of adolescence ten years.¹ These observations of Dr Smith apply to the Government males exclusively.

From a comparison of the ratio of mortality among the Government males with that of the females, it is evident that there are few or no points of analogy between the two. Differing in habits of life almost as much as in organization, a correspondence *a priori* was not to be expected. And while more regular habits of life in the female give her a superior vitality, the difference in organisation gives rise to the different rates of mortality at particular ages. Thus at fourteen, the mortality of the female, previously less, approximates very nearly to that of the male. That critical period over, the female life seems to rise in value with an elastic spring until twenty-five, when a reaction takes place; the impetus previously communicated losing its force with the lapse of years. The stream of life again begins to run with a stronger current until about thirty-five, and increases till the limit of forty-five, when natural causes again produce a languid flow, so that for a few years female life is actually inferior to male. After that period, as may be expected, it again rises in value, but shortly declines. For these reasons, we may hold, that the ages of fourteen and forty-five are the two hinges upon which female life turns—its rise and decline being attributable to similar causes.²

In 1834 the Equitable Society published a statement of the mortality found to prevail among the members from the time of its institution in 1762 up to 1829. This table comprehends almost exclusively male lives. From age 30 to 40 it is almost identical with the Carlisle. From 45 to 60 it is about 3 per cent. lower, and from 65 to 75 about $5\frac{1}{2}$ per cent. also lower,

¹ *Philosophy of Health*, by Dr S. Smith, London, 1835, pp. 117, 118, 120, 182.

² The above, commencing with "From a comparison," is quoted in 2nd edit. of the late Mr C. Walford's *Insurer's Guide and Hand Book*, London, 1867, and was taken by Mr Walford from 1st edit. of this book.

in mean duration of life, or mean after-lifetime. When the Equitable is contrasted with the Medium of the Male Life and Female Life, being the basis of my Commutation Tables (founded on the whole Government Experience up to 1825), the results of the comparison are nearly identical with those above stated with reference to the Carlisle Table, except that in the last stage the difference is $6\frac{1}{2}$ per cent. (in place of $5\frac{1}{2}$). The tables appended (along with others to be afterwards noticed), p. 38, are referred to for the particular differences.

In reference to the Equitable Experience, there is another table which Mr Griffith Davies, the eminent actuary, calculated from Mr Morgan, the Equitable actuary's statements at the general meetings of the Society; but in the above comparison I have made use of the table published by the Society in 1834, and constructed by Mr Morgan.

Following on the Registration Acts, and combining with their results the General Census of 1841, the late Dr Farr, the eminent statist in charge of that department, published tables based on the experience of the year following that Census, to which he gave the name of English Life Table No. 1, being limited to England and Wales. Afterwards he published No. 2, based on seven years' results, and finally No. 3, grounded on seventeen years' experience. These tables are the basis of the system of Life Assurance of the Government under the management of the Post Office.

The Life Assurance Companies united to form a table based on the experience of 17 principal Offices, which goes by the name of the Experience Table of the 17 Offices.

Any remarks that might be offered are superseded by the more recent and fuller experience of the twenty offices, ten English and ten Scottish, on which are based the Tables of the Institute of Actuaries.

These tables give several divisions, one being of healthy lives, and that in two sections—the one giving the experience from the precise date of commencement of the assurance—the second omitting the first five years' experience, and beginning

with the experience of the lives, *after* being on the books for a period of five years.

The tables of the Institute are reckoned, for Life Assurance uses, the best existing, and have been adopted extensively at home, and also in the United States of America, for valuation purposes.

In order to understand the relations which various tables we have referred to more particularly, bear to each other, we subjoin a table showing the mean duration, or expectation of life at various ages, according to each special table (*see* p. 38).

From the arrangement adopted, of the tables following, facts are brought out, in the comparison, which might not otherwise be so obvious.

The exact coincidence, in results when summed up, of the Medium Expectation of Males and Females, Government Tables 1693–1825, with the Carlisle Table, hardly needs to be pointed out. It is patent. After that, the Equitable Table, by Morgan, shows a difference of about half a year less duration on the average, although up to age 40 as before remarked it is almost coincident, the principal difference being at age 55–65, of about $\frac{3}{4}$ ths of a year duration less, compared to Government 1693–1825 Table, and $\frac{1}{2}$ a year, compared to Carlisle.

As regards the Sinking Fund, Medium of Males and Females, it is seen that where the analytical mode of calculation is applied to those already of 4 years and upwards continuance as annuitants, the average difference from Government 1693–1825 Medium, is reduced to $\frac{1}{8}$ th of a year's duration, longer for the 1808–1875 Table. This is as much as to say that, but for the analytical mode of calculation used on the latter, there is really *no practical difference* between the two tables. It also gives utterance to the fact that the vitality of annuitants has diminished as we advance into the nineteenth century, compared to the vitality experienced in the eighteenth century. This would be an important fact well worth noting, but for another relative fact which tends to neutralise the first. This is the fact, which is not alluded to in the Report of the Government

TABLE—Mean Duration, or Expectation of Life, at various Ages, according to each Table.

Ages.	(1) Government, 1693- 1825, Medium of Males and Females.	(2) Carlisle 1779- 1787.	(3) Equit- able, 1762- 1829, by Morgan.	Government Sinking Fund 1808-1875, Medium of Males and Females.		(6) Institute of Actuaries, No. 3, 1841- 1857.	(7) English Life Table, No. 3, 1841- 1857.	(8) Government, 1698-1825.		(9) Government Sinking Fund, 1808-1875, Analysed after four years and upwards from Entry.		(10) Government Sinking Fund, 1808-1875, Analysed from Entry.		Ages.
				(4) Analysed from Entry.	(5) Analysed after four years and upwards from Entry			Males.	Females.	Males.	Females.	Males.	Females.	
30	34.04	34.34	34.33	...	...	34.68	32.76	32.50	35.57	...	...	...	...	30
35	30.89	31.00	30.93	...	...	31.03	29.40	29.39	32.38	...	...	...	...	35
40	27.65	27.61	27.40	27.94	27.62	27.42	26.06	26.24	29.05	25.73	29.50	26.04	29.84	40
45	24.34	24.46	23.87	24.77	24.47	23.79	22.76	23.04	25.65	22.86	26.07	23.14	26.40	45
50	20.95	21.11	20.36	21.59	21.31	20.30	19.54	19.48	22.43	20.01	22.60	20.26	22.92	50
55	17.74	17.58	16.99	18.45	18.18	16.93	16.45	16.47	19.01	17.16	19.19	17.34	19.56	55
60	14.63	14.34	13.91	15.32	15.08	13.80	13.53	13.51	15.75	14.24	15.91	14.38	16.26	60
65	11.81	11.79	11.10	12.42	11.99	11.01	10.82	10.93	12.69	11.25	12.72	11.68	13.16	65
70	9.31	9.18	8.70	9.82	9.30	8.54	8.45	8.69	9.93	8.73	9.87	9.33	10.30	70
75	7.24	7.01	6.60	7.66	7.02	6.42	6.49	6.90	7.59	6.66	7.37	7.29	8.02	75
80	5.33	5.51	4.80	5.91	5.18	4.71	4.93	5.04	5.62	4.93	5.42	5.67	6.14	80
	203.93	203.93	198.99	...	...	198.63	191.19	192.19	215.67	...	...	...	...
Avtge. 30-80	18.54	18.54	18.09	...	...	18.06	17.38	17.47	19.61	...	...	...	...	Avtge. 30-80
	139.00	138.59	133.73	143.88	140.15	132.92	129.03	130.30	147.72	131.57	148.65	135.13	152.60	
Avtge. 40-80	15.44	15.40	14.86	15.99	15.57	14.77	14.34	14.48	16.41	14.62	16.52	15.01	16.96	Avtge. 40-80

Actuary of 1883, that the average number of entrants into the Sinking Fund Scheme has materially decreased of late years. Thus, notwithstanding the effect of the use of the analytical system in raising, the result exhibits a decrease in vitality of the annuitants. The proportion of annuitants long on the books, compared to the number of new entrants, is now much greater, and the advantage of infusion of the *new blood* has, to a great extent, of late years been lost. We cannot further pursue the subject, except to remark that if the 675 old selected males objected to for introduction by the Actuary consulted by the Government had, as he wished, been kept out of the calculation, the Mean Duration of the Sinking Fund Annuitants would have appeared to be less than that of the Government 1693-1825 Annuitants' Mean Duration of life.

The effect of the introduction of the 675 old selected males is fully discussed in General Preface, vol. iv. of Commutation Tables already referred to, and its amount in a question of annuities calculated at 4 per cent. interest is assigned as equal to half a year's purchase, of increase. In Expectation of life it must count for more, and on this footing any one may convince himself, by contrasting No. (8) table preceding with No. (9) table, that, as above maintained, the Mean Duration of the Sinking Fund Annuitants would, but for such inclusion, be less than that of the Government 1693-1825 Annuitants' Table.

This is not an actuarial work, and this subject therefore cannot be further noticed here. If wished to be further examined into, there will be means of doing so by consulting the larger work, which is to be found in the Public Libraries; at Rome, *Government Library*; at Albany, State of New York, State Insurance Department; New Zealand, Wellington, State Insurance Department; London, British Museum; Manchester, Public Free Libraries; Glasgow, Mitchell Library; Edinburgh, Advocates' Library, Signet Library, and Solicitors' Supreme Courts Library.

As regards general observations, it may be noticed that the

life of annuitants is longer on the average than the life of assurers. The cause is not far to seek, the annuitant being secured against the difficulties and troubles that attend upon the assurer, who has to rely entirely upon his own exertions, in the ordinary case, for procuring the means of living. As a further easily seen result, the lives of female annuitants are longer than the lives of male annuitants. This may partly arise from the same cause, seeing that, for the most part, the purchasers of life annuities acquire these late in life (as a fact, 52 per cent. of the annuities of the Sinking Fund existing in 1875 were purchased for the age 60 and upwards), and the males have had their health, and consequent prospect of longevity, deteriorated by the occupations in which they have been previously engaged. This, in the calculations, affects all the younger lives, as their prospects of longevity are calculated from the experience of those who have actually run the risks incident to the higher ages.

In the Government Annuitants' case, the various diverging results, in regard to either class, males or females, have been caused, not so much by any real differences in the actual vitality of the annuitants among themselves, men or women, but rather by the difference of the stages in which they were observed. A single example may suffice for illustration—say of a female, aged 63 :—

Epochs.	Sinking Fund Annu- tants' Expectation of Life. For Females.	
1808–1823. Mr John Finlaison's tables of 1829, . . .	15·09 years.	
1808–1850. Mr Alex. Glen Finlaison's table of 1860, . . .	14·23 „	
	Difference, . . .	86 „

equal to 314 days. In the first case the survivors were 80 per cent. of those who ran the risk of life ; in the second case they were 41 per cent. We have here the explanation of the diminished length of life, not real, but apparent—

Mr Alex. Glen Finlaison's table of 1860	
giving (as above),	14·23 years
Mr Alex. John Finlaison's table of 1884	
gives	14·26 „

Difference, 03 „

which is equal to 11 days, but is on the opposite side. The survivors in the last case numbered 27 per cent., and it might have been expected that the Mean Duration of life would show a diminution of ·56 of a year, equal to 204 days. But it is only 11 days, and counts the other way—that is, as 215 days of increase. This is a movement in the opposite direction, and indicates a recovery of vitality to the extent of about two-thirds of that which was lost between 1823 and 1850. The actuary of the National claims that the vitality of females has been partially restored. It does not go the length of complete restoration, however, and stands, practically, as it did in 1850—so far as the above shows.

The Experience of the Institute was published in 1869, deduced from the lives of 160,426 males and females (the immense proportion of males) entered in the books of ten English and ten Scottish life offices, the observation commencing with the earliest record in each life office, and continued down to 1863, December 31. Of these,

		Percentage in Entrants.
There remained on the books at the close,	88,329	55·1
There were discontinued during period of observation,	45,376	28·3
		83·4
There died,	26,721	16·6
	160,426	100·0

At first sight the above appears to be deficient in weight, only one-sixth of the whole number entering having died, *according to the books*, the remaining $\frac{5}{6}$ ths being to the extent

of above half of the whole entrants by the books alive at the close of the observation, and above one-fourth of the entire body of entrants having withdrawn during the course of the observation.

The results are considered very valuable, however, because their minute accuracy cannot be questioned, evidence having been obtained of the age at entrance and at death in every instance. The question remains, no doubt, whether the $\frac{5}{6}$ ths of the whole assured remaining or discontinuing as at 1863 would, if observed to the end of their respective lives, follow the same course of mortality described by the one-sixth who have died. On the doctrine of probabilities the induction would be held insufficient, and a majority at least would be required to give confidence. In the actual case it will not be possible at any future period to ascertain the deaths of all the 88,329 remaining, because a large number of these, probably a quarter, will discontinue their policies, and be no further subject to observation. However the observation is according to what has taken place, and in all probability, according to what will take place in Life Assurance, and in basing the Tables of Premiums upon that Experience of $H^M^{(5)}$, the life offices, while taking the advantage that is derived from dropping the first five years' Experience, a period during which such lives may be held to be in a state of selection, give the public the advantage of any of the lives discontinued from assurance, which however may, for the immense majority of them, be held to have been in good health at the date of discontinuance of the policy.

While this Table of the Institute Experience drops the experience of the first five years, and commences the observation, in each instance, only at the epoch of five years after entrance, showing a lower Expectation of life, and consequently inferring a higher premium, there is another table, the H^M , in which the observation commences from entry. The life offices have in their valuations sometimes made use of the first table referred to, including male lives only, and

sometimes of the second table, also including males only. Generally speaking, the second table has been the most employed. It gives the liability as less than by the first Table. The second table (6th in order), H^M (Healthy Males) is almost coincident with the Equitable Table (Morgan), (3d table), except at age 30, where the difference is only, however, a third of a year's Expectation, by which Institute Experience is higher. It is not improbable, seeing that nearly a quarter of a century has now elapsed since the close of the observation on which the Institute's Experience is based, that a further observation may ere long be taken. It would be of advantage in a double respect, as it would carry out the older observation nearly to the close of the lives on the books, in the majority of cases, and it would embrace an additional number of offices, so as greatly to enlarge the Experience. The ratio between the number of deaths and the total number entering might also be brought nearer to a par, so as to make the results still more trustworthy.

One other table, the English Life Table No. 3, Males, has been added, but it shows, for all usual ages in making an assurance, a considerably less Expectation than that of the Institute Healthy Males.

We must waive further remarks, however interesting, our space being limited.

CHAPTER THIRD.

THE GENERAL PRINCIPLE OF LIFE ASSURANCE.

No Company agrees to return to its *customers* the amount which these contribute, but every Company guarantees the value which it promises, be it more or less than the value received. On this head Professor de Morgan has well said :— “ Insurance is, in fact, in a limited sense, and in a practicable method, the agreement of a community to consider the goods of its individual members as common. It is an agreement that those whose fortune it shall be to have more than average success, shall resign the overplus in favour of those who have less.”¹ The CERTAINTY is the only thing bargained for ; trade and speculation *might* have realised greater results, trade and speculation might have realised ruin. The man who is dependent upon his daily exertions for the support of his family, must feel that the comfort of his own family is dependent for its continuance upon his continued existence. Existence no science can guarantee ; Life Assurance guarantees its average objects.

According as society is formed, the father feels that it is the duty of religion, as well as of feeling, to use every proper means for the happiness of his family when he himself shall be removed from them. He knows that to-morrow, that even to-day, is not his ; and though he may be content in his own mind that to-morrow for himself may take care of itself, he

¹ *Essay on Probabilities*, by Augustus de Morgan, London, 1838, preface, p. xv.

desires also that the to-morrow of his children may not be dependent for its sunshine upon his.

He mistrusts not Providence, for he knows that Providence is guided by certain and irrefragable laws, and he deems it no irreligion to study those laws, that he may learn the future from the present and the past.

It is not in a general treatise of this nature fitting or expedient to dwell too long upon the fundamental principle on which are grounded all the results of Life Assurance, the certainty and constancy of the natural laws. But, so far from irrelevant, it is necessary that we consider them, at least in their bearing upon the duration and probable existence of human life.

Yet, strange to say, there are men to be met with, who have gone so far as to doubt the compatibilities of such provision for the future, with a true religious dependence upon Providence. And, "Take therefore no thought for the morrow, for the morrow shall take thought for the things of itself," is quoted as a rule against such mistrust of the Divine goodness.

As long as man possesses reason, he must reason from cause to effect, from the past to the future; and that only is a distrust of Providence which distrusts the blessings of Providence on the efforts which experience and reason have shown to be adapted to the end in view.

Nothing is more uncertain than the duration of individual life—nothing more certain, *cæteris paribus*, than its average continuance. In the same age, and in the same country, the rate of mortality may be so affected by the varying quantity of food in proportion to the population, by occasional epidemics, and other causes, that the deductions, even of a series of observations, will not be exactly applicable to every period. But who can doubt that even these variations are guided by certain laws, and that a more extended induction might even enable us to allow, as it were, for the "parallax" in our observations, and calculate, almost to astronomical

accuracy, the laws of human existence? The tables that have been already calculated, especially those calculated during the present century, are sufficiently correct, upon the average, to show that a nearer and nearer approximation is being made to a knowledge of these laws, and the attention which has been bestowed upon the subject by men of mind and science, and the experience of the various corporate bodies who have assumed them as a basis for business, will continue to perfect the results.

Out of a certain number of throws of the dice, is calculated by arithmeticians the exact number of aces which will come up, and were the throws made by a machine, as uninfluenced by external causes, as the calculations of arithmetic, the result would exactly correspond with the assumption. But the throws are made by human fingers, which are affected by varying temperature, and by the varying positions of the medium by which the throws are made, and these the arithmetician cannot compute. Thus the results even of many thousands of attempts will hardly correspond with the arithmetical conclusions. But who doubts that the law exists—that not any one side of the die falls to the ground but under equal necessity as another, and that (again other things being equal), with equal causes, equal results will be obtained by a series of experiments. “Not a sparrow falls to the ground” unguided by a cause—necessary and certain.

Thus, while the basis of computation is ever necessarily limited, we may still place some reliance on the conclusions of a thousand observations, under similar circumstances. Yet in page 11 of Mr Thomas Carlyle’s “quite indescribable” book called *Chartism*, you will find these words:—“Northampton Tables, compiled by Dr Price from ‘Registers of the Parish of All Saints, from 1735 to 1780;’ Carlisle Tables, collected by Dr Heysham, from observations of Carlisle City for eight years, ‘the calculations founded on them’ conducted by another Doctor; incredible document, considered satisfactory ‘by men of science in France.’ Alas! is it not as if some zealous

scientific son of Adam had proved the deepening of the ocean, by survey, accurate or cursory, of two mudplashes on the coast of the Isle of Dogs?"

Now the whole question here is this, Can any reliance, in future calculations, be placed on the results of observations in one parish of England, conducted for 45 years, and scientifically analysed; or, is the proportion of time and space so limited as to make such reliance visionary and absurd? This is a question of probability, which is to be answered by the feeling of the individual to whom the facts are presented. Mr Carlyle, whom no one will accuse of denying the general importance of the Baconian system of induction, *feels* that the induction here is insufficient.

The justice of Mr Carlyle's conclusion has been put to test by the experience of more than forty years since he wrote the sentence contained in the above quotation. As regards the Northampton Table, the verdict must be that he was, in the main, in the right. Dr Price constructed his Table from deaths alone, on the assumption of a stationary population; while the fact was, that the population had constantly increased. Dr Farr has, from population returns of 1841 for Northampton, and numbers living and dying there, constructed a Table termed by him "True Northampton," which differs widely from another he constructs from deaths there alone, the latter agreeing with Dr Price's Northampton Table (from age 0 to 50, but diverging at 60, when it agrees with the true, but gives one year less Expectation than even the Table of Dr Price).

But as regards the Carlisle Table, in the opinion of Mr W. T. Thomson, "it is as near the truth as we will probably ever reach,"¹ which is very decided, and not altogether undeserved commendation. The general opinion is, we believe, that it represents very well the average of healthy life in England for country districts. Man's life is undoubtedly affected, as regards duration, by many causes, physical, moral, constitutional; and a variety in results is inevitable when we

¹ *Insurance or Assurance*, Edinburgh, 1856, p. 62.

take the statistics of different countries, of different classes in the same country, and of different periods of observation. But that these variations, when the observations are made with the requisite accuracy, and class contrasted with class, are confined within tolerably narrow limits, is also true. In reference to this point the immediately preceding chapter gives some details.

Our business, however, at present, is the general treatment of the subject of the Life Assurance principle, in its relation to duty and interest. It has been well said by Professor de Morgan that, "the theory of Insurance, with its kindred science of Annuities, though based upon self-interest, is the most enlightened and benevolent form which the projects of self-interest ever took."¹

It is true, indeed, that were A assured that he should live for fifty years, and that B should die to-morrow, the chances are that self-interest would persuade benevolence to confine its charity at home, and instead of contributing £2 a year to an Insurance Office, in order that B who lives only to pay a single £2, may receive, *i.e.*, his Executors, £100 to-morrow; while A's £100 will but purchase the same amount for his children in fifty years, he would lay by his £2 a year with his bankers, that his children might receive it with due interest in due time. But not knowing so much of the future, his self-interest plays the part of benevolence, and both A and B contribute their £2 a year to the common fund, that they may have the satisfaction, each, of knowing that, *pecuniarily* speaking, they may die to-morrow.

Thus we may lay aside the mere question of duty, and appeal to the family instincts and to self-regard; and the majority of men, it will be admitted, are more likely to be influenced for good through such a medium, than through the higher principle of a wide-minded benevolence.

De Morgan further remarks, that "though, as yet, the theory of insurance has only been applied to the reparation of the

¹ *Essay on Probabilities*, London, 1838, p. xv.

evils arising from storm, fire, premature death, disease, and old age ; yet there is no placing a limit to the extensions which its application might receive, if the public were fully aware of its principles, and of the safety with which they may be put in practice.”¹

Indeed, the principle of Life Assurance being simply that of assuring the “average” to the “individual,” its extension to other laws besides those of mortality is obvious, and may be recognised both in mercantile and benevolent associations. It is this principle which has been made use of for about half a century by Guarantee Companies, by which, for a certain annual contribution, the amount of the pecuniary security required in offices of trust and responsibility is guaranteed in the event of defalcation.

The advantage of such an institution to the friends of responsible officers, as well as to the parties to whom these officers are responsible, is even greater than to the officers themselves. It is always a delicate, and frequently a dangerous, loan—that of one’s name and character in favour of a friend—the lender or guarantor is placed upon the edge of a precipice, his fortune, to the extent guaranteed, being no longer solely dependent on his own energies and character, but on those of his brother, or his kinsman, for whom he becomes bound, and all his endeavours, and all his success, may be frustrated in a moment, by the failure of his friend to redeem his own obligations. Now, by the system above mentioned, every man becomes his own security. Instead of asking his friend to become responsible for his good conduct, his own annual subscription obtains him the right, and not the favour of a full pecuniary guarantee—and himself, his friend, and his employer, are secured independently of each other.

The Insurance against the loss that may arise from accidents or casualties is another practical extension of the theory of Insurance, and widely availed of. Notwithstanding the perfection at which the railway system of conveyance of

¹ *Essay on Probabilities*, London, 1838, p. xv.

passengers has arrived, it is still a source of comfort and satisfaction to be provided, in the form of an insurance ticket, with the certainty that, should an accident occur, either to limb or to life, a pecuniary provision will arise available to the party insured, or to his relatives and friends. It is true that the railway company may be made liable, but as may be seen from many reports in the newspapers, that liability is sometimes disputed by the companies, and hence the benefit of securing something which can be relied upon as a certainty.

That the Accident Companies perform their contracts is beyond doubt. That they may occasionally have recourse to hair-splitting in a question of damages is possible, but we have seen no reported case of such. The author had the misfortune, on a Lancashire railway, to come into collision, with his head, against the railway carriage window, which (the window) was broken. On claiming from the Accident Company the cost of the damage, demanded payment of by the Railway Company, he was answered that the damage not being personal, was not covered by the insurance. This appeared to be carrying principle out to an extreme.

In connection with the above, the Plate Glass Insurance Companies naturally present themselves, and one company advertises £60,000 as paid for over 14,000 breakages, being an average of about £4 per breakage. This is undoubtedly a very useful company.

Horses and cattle are also insured, a great advantage to the dealer and the agriculturist. The extension has also been made to carriages and bicycles.

It would be unpardonable not to direct special attention to the important proportions which Industrial Insurance has assumed within the last forty years. This embraces compensation for time lost in consequence of being laid aside by sickness, and the extent to which it has been carried has even suggested the desirableness of Government taking up the insurance, as regards the working classes, under a compulsory system, of a provision for old age. In our opinion, the decision

of the Parliamentary committee to whom the matter was referred is correct—that a case had not been made out for setting up such an establishment. The experience of the German Government, who have actually, in the end of 1884, initiated that system, will be useful, no doubt.

Whether the principle of assurance could be successfully applied to Emigration and Colonisation is a point that has not yet been practically settled. The direction taken of late years seems to have been rather to assist colonists who had commenced the cultivation of the soil, or the stocking of pastoral districts with cattle, by means of loans secured over the lands, the crops, and stock. For such purposes many companies have been formed in this country, and are still in operation. The successful prosecution of such enterprises in the Colonies has a powerful though indirect tendency to encourage the business of Life Assurance, and to such influences Companies like the Canada Life and the Australian Mutual are probably indebted for the wonderful progress they have respectively made.

On the whole, we are inclined to the belief that, looking to present circumstances, the best hope arises from improvements being made upon the practice of Life Assurance. In this view the right mode of dealing with a policy-holder who, from circumstances unforeseen at the time of commencement of the policy, has found himself unable to continue his payment of premiums, is of great importance. It appears that different life offices deal with this in different ways, the general principle being recognised by all, that the value to be offered by the office for a surrender of the policy constitutes a fund out of which the policy may be maintained in force either wholly or partially. If wholly, then the policy can be kept up only so long as the fund available from surrender value is unexhausted ; if partially, then by the issue of a paid-up policy for the amount corresponding to the age of the assured and the surrender value. It is required that the assured communicate with the office as to which mode he prefers ; otherwise the office will, as it judges best, either continue to pay the premiums out of the

surrender value, or will issue a paid-up policy for the proper reduced amount.

The above is a statement entirely general, and may not be realised in any existing office, because each office has its own special plan for dealing with the public in the case of policies of parties who find themselves unable to continue the payment of the stipulated premiums.

The plan originated in the United States, a fruitful soil for the production of new modes increasing the utility of the system of Life Assurance. The experienced necessities arising during the civil war which preceded the abolition of slavery there, were powerful motives for devising means of continuing the benefits of Life Assurance, and as good will occasionally spring from apparent evil, so has arisen this improvement in the practice of Life Assurance.

It might be better were the life offices to adopt a general system, rather than each carving out its particular mode of dealing with such cases. The present variety of methods increases the difficulty of the assured in his selection of an office. Possibly after the experience of the Institute of Actuaries has had a quarter of a century's course, and a further investigation of the rate of mortality among assured lives is made, it may be possible for the offices also to agree upon some general lines to be adopted in reference to all policies in the case of inability of the assured to continue the payment of the premiums.

There is but one other object connected with the extension of the Life Assurance principle, on which we shall occupy the attention of the reader further, and we shall then proceed to the statement of the different modes of Insurance offered by the offices to the public, and to the elucidation of the principles on which the price of the respective benefits is regulated.

The over-population of this country from the laws of *birth*, is closely connected with the provision for heirs and dependants, contingent upon the laws of *death*, and it is impossible, in considering one subject, altogether to overlook the other. It

is the constant pressure of population on subsistence, that, more than any other thing in economics, affects the ratio of disease and mortality, and to restore the equilibrium here is to restore the equilibrium of social happiness. And the Life Assurance Offices are interested, perhaps, more than they are themselves aware, in remedying an evil, which along with over-speculation and its disastrous sequel, is the cause of the life-shortening anxiety of the uneasy or middle classes, as well as of the disease and mortality of the lowest class. A great remedy has been emigration, but it is now beginning to be considered that both the Government at home and the Colonial Governments ought to do more for that object than they have hitherto seen fit to accomplish. The broad fact, that the great stream of British emigration is directed into the United States is arousing more attention, and the question is asked, Whether we do not possess land sufficient in extent and productive powers to accommodate, on what may be termed our own soil, that surplus population which stands in need of new settlements?

In carrying into effect a scheme for the above object, it may be considered whether it would not be most materially promoted by a combination of the principles of modern Colonisation with those of Life Assurance.

The principle of modern colonisation has been to sell labour to the capitalist along with land, charging more than the mere value of the soil, in order to guarantee a supply of labour to make the land available.

It is obvious that in this manner the man of money and the man of labour are both assisted; the former being able, out of his capital, to be at a large immediate outlay in passage and land, which will ultimately be well redeemed; the other, at the expense of the former, obtaining a new field for the development of his energy and skill. But the moderate capitalist, the middle class man, is hardly benefited, for he neither can lay out like the former nor be franked like the other.

In this position of matters there is a fair opportunity for the Home and Colonial Governments coming to the rescue, as it were, to the mutual advantage of them both. Two things are required to be provided—money and land. The natural expectation would be, that the Home Government would provide the money, and that the Colonial Government would provide the land. Seeing that the land is at present in a manner unproductive, the Colonial Government might be content to wave all demand for payment of the price until such time as the money outlay of the Home Government were repaid with moderate interest. Combining the Life Assurance principle, it might be made a condition of the assistance to be offered in money and land, that the emigrant should be of the class eligible for life assurance, and should take out, it may be from Government or from an Assurance Company, a policy of an amount sufficient to meet the accumulated money advance and price of land with interest.

No doubt a "Land Insurance Company" might meet the emigrant's case by giving in return for a guarantee premium on the life of a person of moderate capital, but of energy and character, an immediate possession in land, instead of an equivalent amount of money at death—immediate acres instead of prospective pounds.

At the present moment, however, the spirit of speculation, if not dead, is dormant, and thus there appears to be a necessity of Government intervention to carry out the desired object.

In either case, whether the scheme were undertaken by Government or by an Incorporated Company, there are no doubt many persons of sufficient eligibility ready to avail themselves of it.

Thus A, instead of paying £2 a year, in order to secure £100 to his family at death, pays and guarantees that premium for an immediate possession of one hundred acres, with proportionate labour. His moderate capital is sufficient to provide him with the other necessities of a colonist ; and

the improvement of his land would soon be the best of all securities to the company who supplied him with the land, and the labour to improve it.

If A deal with Government, he may obtain easier terms, because the Government would probably be satisfied with a less rate of interest than would be required by a private company. In the case of Government, however, the emigrant would not have the option to locate himself in the territories of a foreign country, but would require to make his election of one of our colonies as the place where he would devote his skill and industry to the improvement of the land.

CHAPTER FOURTH.

THE SCIENCE OF LIFE ASSURANCE FAMILIARLY EXPLAINED
AND ILLUSTRATED.

THE sciences which hold the foremost rank, as deep and intricate, are, if we may believe the testimony of those philosophers who have studied them most, as simple in their elements and principles as the most trite and generally understood processes which are to be met with in the daily occupations of the great body of men. And it is only the greater number of combinations in our ideas, necessarily produced by the study of the abstruse sciences, which creates a greater difficulty in their acquirement than in that of the simplest mechanical art. Proceeding upon this acknowledged fact, men of science have deemed it worth their labour to endeavour, by the exhibition of the more prominent truths of their systems, or what comes to the same point, of the more general ideas of science in an early stage of combination, to lead the public mind to obtain some insight into those facts and processes of reasoning which are the foundation of all our acquired knowledge.

The greatest success has attended this popular development. The use of a language for the expression of scientific truths, though remote from what is common, and hence unintelligible to the mass, is now being better understood and recognised, as essentially necessary for their more brief enunciation. Popular works on almost every branch of science are now numerous and in the hands of the people, and great intellectual advancement must be the result.

Paley justly observes, that in order to raise one plant you must sow many seeds; but if you sow many seeds, you are certain of raising at least one plant. Thus it may be said to have been with the general spread of information on scientific subjects; and in this manner the general interests of science have received a much more speedy advancement than under a less liberal and popular system could possibly have been obtained.

In the particular branch of Life Assurance and Life Annuities the public have been more scantily supplied with popular information than upon almost any other subject. More than half a century ago, through the beneficence of a nobleman whose testament made provision for the object he had at heart, a series of treatises on a great variety of branches of science was published, called the Bridgewater, in honour of the Duke of that name who contributed the fund which met the expense. This rich mine, comprehending so wide a range of instruction, was totally destitute of any seam communicating a knowledge of the principles of Life Assurance. And yet what could better have illustrated the wise disposition of the Supreme Being, in the varying term of human life, than the certainty of the general laws that regulate its duration, and the reflections that arise from the contemplation of these laws operating constantly upon the human race? "That a law rules the proportions exhibited by the natural decrease of the numbers of mankind, by death, is most manifest, and many are the times when the error of the calculator has, on looking to the sequence of the series (presented by the combination of the whole experience of the Government Annuitants, as actually observed, without modification, combined with the results of introduction of the element of interest, and presented, in a column of figures, on an instrument giving the products), been demonstrated to him by that alone. It is finely said, in the Scriptures, 'the dumb ass, speaking with man's voice, forbade the madness of the prophet,' which may be read 'Corrected the error of the prophet.' But the voice

of nature is more potential ; and if the Christian philosopher, adducing proofs of the existence of an over-ruling Providence over the destinies of mankind, desires to use a powerful argument, there appears none better fitted for the purpose than the regular harmony that is found in the observation, accurately made, of the diminution, by death, of the human race, when observed in sufficiently large numbers."¹

A similar regularity, it may be added, was developed in the observations of the Institute of Actuaries, which would probably have been used for the Tables without graduation, but for the occurrence, in two particular ages, of no deaths, owing no doubt to the paucity of the number living at those ages, as well as to the fact of these being at the most favourable periods of life.

In other quarters, however, the attempt has been made, and with some success, to present a clear popular view of this subject. Among these some of the best must be held to be the contributions under the article "Insurance," in the successive editions of the *Encyclopædia Britannica*, including more particularly those of Mr Joshua Milne, of the late Mr W. T. Thomson, and in the present ninth edition, of Mr George M. Low, F.R.S.E., F.F.A. As Mr Thomson published his contribution, it is to be hoped that Mr Low will also publish his, for the same object,—the benefit of the community at large. In such a task as the popular elucidation, difficulties must be encountered, and the hope may be here repeated, that was expressed in the first edition of the present little work, above forty years ago, that it will be considered no presumption to make here a further attempt to present a clear and intelligible view of the subject to the popular mind, and to rid the system of those incumbrances of symbols and scientific terms which may debar the public from a knowledge of the common principles that regulate the every-day practice of Life Assurance Offices.

¹ Henry, *Government Life Annuity Commutation Tables*, London, 1885, vol. iv. pp. xxi, xxii.

The Science of Life Assurance rests upon the simple fact that every individual of the human race has, at the period of his birth, a certain term of existence which it may be predicted he will live through, viz., what is called the mean duration, mean after life-time, or expectation of life at birth. On measuring the actual duration of the individual's life with that predicted, if a difference occur, let us lay it aside and consider the mean duration, and the real life of another, and deduce the difference between these two. If we go on in this way, taking instance after instance, we shall find that we form two sets of differences, the one arising from the mean being greater than the real duration, the other from the mean being less than the real duration; but that these differences gradually approach to an equality, on taking their amounts respectively, and the more instances we take the more nearly do they agree in amount.

So that, by taking a sufficient number of instances, we find that the two sums are exactly equal; the differences of excess of the mean life over the true being just represented by the differences of defect of the mean life compared with the true—or what is the same thing, that the term predicted, or mean life, is exactly equal to the sum of all the ages to which the parties attain, when divided by the number of the parties attaining to these ages.

It will naturally be a question, How are we to predict the term of existence, and golden mean? This has been done by taking the number of years that have been lived through by a party from birth to death, and also that of a thousand others born at the same time, and dying at all ages, from 1 to 100 years old. The number of years thus lived by each person has been added into one sum, and being divided by the number of persons, the mean duration of the life of a man has been ascertained.

To take an instance, say that the first 10 parties only lived one year each, the next 10 lived two years each, the next 10 three years, and so on, every succeeding ten taken note of,

having survived each one year more than the preceding 10 noted, the number of years which would (there being 100 times 10, or 1000 in all) be lived through by the last 10 would be 100 years each; and the total number of years lived through by the first 10 being 10 years, by the next 20 years by the third set 30 years, and so on to 1000 years, the period lived through by the last 10 collectively, the number of years lived through by the whole 1000 persons would be 50,500 years; and this sum being divided by the number of persons, 1000, would give the term of mean duration of each, or 50 years and a half, which if all shared alike, would be enjoyed by every man, or woman, on the supposition of the number of years of existence of the whole being limited to 50,500.

We do not intend to say that this is the true mean duration brought out by experience (that assigned for the Institute of Actuaries, Healthy Male and Female Experience is 57·6 years; that for Female Life, Government Tables, is 47·0, for English Life Table No. 3 Females 41·9; for Carlisle 38·7 years); but the mode of finding out the mean duration is the same in both, and the only difference is, that when the real mean duration of human life is required, we must, in place of proceeding upon the assumption of one person living one year, another two, and so on, find from actual experience the number of years each person lives through, and then following out the method laid down, deduce the mean duration of each life.

If it were found on trial that there were no similarity or approach to equality in the result of our experience of the length of human life—that on writing down the lengths of the lives of 1000 or 10,000 individuals, and deducing the mean duration; and that afterwards in going through the same process with another body of 1000 or 10,000 individuals, we found the mean duration of the latter to differ widely from the former, it would be to little purpose to continue or follow out our experiments; but this is not the fact, and in nothing is the uniformity of the general laws of nature more powerfully exemplified than in regulating the period of human existence.

The result of experience is constant, that two bodies of individuals, each comprising 1000 or upwards, living in the same country and period, and following similar occupations, have each a period of mean duration, which differs only by a mere trifle from that of the other body.

To proceed now with the inference which we may draw from the fact now held as proved, that the mean duration of life is a fixed quantity, it follows that if each of the 1000 individuals were to treat with a company granting Annuities on lives, and (as we shall suppose for the sake of simplicity), neither giving interest for the purchase-money of the Annuity sold by them, nor taking interest for the annual instalments of Annuity paid by them, each man paying down for an annuity of £1, to be paid yearly for each full year, the sum of £50, 10s., the company would neither gain nor lose by the transaction, as is plain from the fact of the mean duration of each life being, on the supposition we have gone upon, exactly fifty years and a half. Some individuals would draw from the company in all the sum of £100 each, and would be gainers; but others would draw only the sum of £1 each, and would be losers. The gain would, however, upon the whole, balance the loss, and at the end of 100 years, the period of existence of the longest lives, the last £1 would be drawn from the coffers of the company, and the whole body of Annuitants, each having drawn his Annuity of £1 during his life, would become extinct.¹

Let us now consider the case of an Assurance, when the same body of 1000 individuals, in place of paying down a round sum at once, and receiving a small annual return, choose to engage to pay to the office the small sum annually, and the office engages to pay a round sum at the death of each. Throwing, as before, out of account the element of interest—holding that the office gives no interest for the sums paid in, and makes no

¹ The above, commencing with "To proceed now," is quoted in 2nd ed. of the late Mr C. Walford's *Insurance Guide and Hand Book*, London, 1867, and is taken by Mr Walford from 1st ed. of this book (1842).

profit thereon, so as to allow in return nothing more than the bare sum to which the monies will amount.

In this instance we just take the reverse of the case we suggested in the matter of Life Annuities. Each individual of the thousand pays to the office during every full year of his life the sum of one pound yearly, and the office in return engages to pay £50, 10s. to every man on the day on which he dies. A moment's consideration will show that the office is equally safe in this transaction, and equally certain of fulfilling its engagements, as in the instance of a Life Annuity. One man pays in £1, and dies in the course of the year; the office pays on his death the sum of £50, 10s., and he is thus a gainer. Another man pays into the office £1 annually for 100 years, and on his death the office pays the sum of £50, 10s.; he is thus a loser. And in the same way the other individuals are some losers, others gainers; but the gains exactly correspond in amount with the losses; and at the end of 100 years the sum of £50, 10s. has been paid by the office for every person deceased, and with the last payment its coffers have been exhausted.¹

The idea will readily suggest itself, however, that in actual transactions between annuitants and assurers, on the one hand, and the offices on the other, the element of interest, or the accumulation of money by lending it out at a profit, must enter. It does so, and its effect, as the slightest inquiry will show, is to raise the annual return given by way of annuity, above what would be given in the case of no interest being allowed, and to diminish the annual payment to be made to the office for benefit guaranteed by them to be paid at death, on an assurance. The rate of $3\frac{1}{2}$ per cent. compound interest, is found to be about

¹ The above, commencing with "the same body," following "Let us now consider," is quoted in 2nd edit. of the late Mr C. Walford's *Assurance Guide and Hand Book*, London, 1867, and is referred to as being from "*Hand Book of Life Assurance*, published about thirteen years ago." It means the *Hand Book for Life Assurers*, 1st edit., London, John Mortimer, 1842; and Mr Walford has evidently had it also in his 1st edit., 1857, but has not altered the reference in it. See also page 61, note, for another quotation, without reference being specially made.

the average rate at which the valuations of offices, to the number of 45, have been made; and 5 per cent. simple interest producing, for a period of 20 years, about the same amount as $3\frac{1}{2}$ per cent. compound interest, we shall use 5 per cent. rate of simple interest in the statements that now follow. Assuming, therefore, in the case of the purchase of an Annuity from the office, that the office would make 5 per cent. simple interest on the payment made to them, and allowed the purchasers of the annuities the full benefit of this source of profit, it is obvious that this would be equivalent to the annuitant paying to the office one-twentieth part more than the £50, 10s. which we supposed him to pay down in the former instance, and that for every year of the mean duration of his life, which is $50\frac{1}{2}$ years. The total additional payment would thus be equal to the twentieth part of £50, 10s. annually, or £2, 10s. 6d. annually, which when multiplied by $50\frac{1}{2}$ becomes £127, 10s. 3d.; and on the original payment of £50, 10s. being added, the whole amounts to £178, 0s. 3d. This would, upon the whole sums received by the office, be equivalent to an addition of a little above two and a half times the original sum, as every sum they received of £50, 10s. would be equal to £50, 10s., with £127, 10s. 3d. added, or £178, 0s. 3d.; and on this ground they might, with safety, pay each annuitant a little more than two and a half times more than the £1 annually, or £2, 10s. 6d. additional, together £3, 10s. 6d., and be in as favourable a situation at the end of the 100 years as they had been on the former supposition; for, as the interest received upon the sums paid to the office is a little more than equal to two and a half times the total of these sums, this would be equal to a little more than two and a half times the whole Annuities—the sums of all the annuities, and the sum of all the purchase-mones having, on the former supposition, been shown to be equal.

Similarly in the Insurance transaction, let us suppose the same rate of simple interest to be made by the office upon the annual payments of premiums made to them—that is, 5 per

cent.; and, as before, let the insurer receive the full benefit of this profit. As the interest makes each sum paid in of a little more than two and a half times more value, this is equivalent to the insurer's paying a little more than two and a half times more premium than on the former supposition of no interest being received or granted; and thus, in the case of a little more than two and a half times more premium, or £2, 10s. 6d. in addition to every £1 being paid by the insurer, he might rightly claim, and the office would justly pay a little above two and a half times more at death. Thus the 5 per cent. interest, making the £1 equal to £3, 10s. 6d., the insurer would receive on the day he died a little above two and a half times more than the sum he would have received on the supposition of no interest being made, or £127, 10s. 3d., with the original £50, 10s. added, making £178, 0s. 3d. It must be apparent that the office would be left in the same position at the end of its hundred years of existence as before, its income having increased by a little more than two and a half times the former amount, and its outlay having also increased to the same extent.

We might now consider the case of an annuitant or insurer receiving compound interest for his money; but as the same principle regulates the whole, it is unnecessary to treat this at any length.

It was pointed out that 5 per cent. simple interest was an approach to $3\frac{1}{2}$ per cent. compound interest for a period of 20 years. If we take $3\frac{1}{2}$ per cent. compound interest, being the rate at which valuations are made and also premiums calculated, or nearly so, for office purposes, then the £50, 10s. supposed to be paid for a Life Annuity would at the end of $50\frac{1}{2}$ years accumulate to the amount of £287. Again, the company paying £1 per annum during $50\frac{1}{2}$ years, these instalments accumulated at $3\frac{1}{2}$ per cent. compound interest would amount at the end of that period to £133. Thus $3\frac{1}{2}$ per cent. compound interest, being reckoned on each side, the company would require to pay more than double the £1

per annum, or about £2, 3s. 2d. per annum. If in place of $3\frac{1}{2}$ per cent., $2\frac{1}{2}$ per cent. compound interest were substituted (which is the rate allowed in the Post Office Annuities of the Government), then the £50, 10s. would in $50\frac{1}{2}$ years accumulate to £176, and the £1 per annum payable during the same period would amount to £99. The company would thus have to pay £1, 15s. 6d. in place of the £1 per annum.

It is thus seen that the introduction of the element of interest, even at the low rate of $2\frac{1}{2}$ per cent., creates great difference in result. All the cases that can occur are comprehended in the principles of the supposition we have laid down. We shall now proceed to illustrate them by particular examples.

1. *A Common Assurance, purchased by an Annual Premium.*

The first example we shall take, is generally termed a Common Assurance. Here the person wishes to assure the sum of £100 payable at the period of his decease to his surviving relatives.

Taking our first supposition, and throwing entirely out of account the element of interest, which merely modifies the result without affecting the principle of the transaction, we have seen that a payment of £1 annually would enable a party to insure the sum of £50, 10s. payable at the period of his decease, and therefore a payment of £2 would enable him to receive £101. But as it is of the utmost importance to present the subject in the clearest light, that the truth of the principles of Life Assurance may be recognised under every point of view, we shall now give a tabular statement of the result of 1000 children, all just born, or, as Actuaries term it, aged 0, having annually paid for them to an Insurance Company the sum of £2 each, and dying at the rate of ten persons every year, until the whole body are extinct; and the office, on the other hand, paying out annually to the heirs of each person deceasing the sum of £101 (but say £100, a simpler number to handle).

TABLE SHOWING THE

For the sake of a compendious statement, we shall exhibit the first five years' results only, in full, and arrange the succeeding years in periods of five years each.

I. Table showing the Progress of an Office during the First Five Years.

1. Years.	2. Number of Persons living at commence- of each Year.	3. Periods of Five Years each.	4. Gross Sum paid to Office dur- ing each Year.	5. Gross Sum paid by Office dur- ing each Year.	6. Surplus of each Year's Receipts over its Payments.	7. Deficiency of each Year's Receipts below its Payments.	8. Total Funds of Office at end of each Year.
1	1000	1	£2000	£1000	£1000	£0	£1000
2	990		1980	1000	980	0	1980
3	980		1960	1000	960	0	2940
4	970		1940	1000	940	0	3880
5	960		1920	1000	920	0	4800
			9800	5000	4800		

II. Table showing the Progress of an Office during its whole Period of Existence.

1. Years.	2. Periods of Five Years each.	3. Number of Persons living at commence- ment of each Five Years.	4. Gross Sum paid to Office dur- ing each Five Years.	5. Gross Sum paid by Office dur- ing each Five Years.	6. Surplus of each Five Years' Receipts over its Payments.	7. Deficiency of each Five Years' Receipts below its Payments.	8. Total Funds of Office at end of each period of Five Years.
1 2 3 4 5	1	1,000	£9,800	£5,000	£4,800	£0	£4,800
6							
7							
8							
9							
10	2	950	9,300	5,000	4,300	0	9,100
11			19,100				
12							
13							
14							
15	3	900	8,800	5,000	3,800	0	12,900
16			27,900				
17							
18							
19							

Table II.—continued.

1. Years.	2. Periods of Five Years each.	3. Number of Persons living at commence- ment of each Five Years.	4. Gross Sum paid to Office dur- ing each Five Years.	5. Gross Sum paid by Office dur- ing each Five Years.	6 Surplus of each Five Years' Receipts over its Payments.	7. Deficiency of each Five Years' Receipts below its Payments.	8. Total Funds of Office at end of each period of Five Years.
16	4	850		5,000	3,300	0	16,200
17			8,000				
18							
19			36,200				
20	5	800		5,000	2,800	0	19,000
21			7,800				
22							
23			44,000				
24	6	750		5,000	2,300	0	21,300
25			7,300				
26							
27			51,300				
28	7	700		5,000	1,800	0	23,100
29			6,800				
30							
31			58,100				
32	8	650		5,000	1,300	0	24,400
33			6,300				
34							
35			64,400				
36	9	600		5,000	800	0	25,200
37			5,800				
38							
39			70,200				
40	10	550		5,000	300	0	25,500*
41			5,300				
42							
43			75,500				
44	11	500		5,000	0	200	25,300
45			4,800				
46							
47			80,300				
48	12	450		5,000	0	700	24,600
49			4,300				
50							
51			84,600				
52	12	450		5,000	0	700	24,600
53			4,300				
54							
55			84,600				
56	12	450		5,000	0	700	24,600
57			4,300				
58							
59			84,600				
60	12	450		5,000	0	700	24,600
61			4,300				
62							
63			84,600				

* Highest amount of Funds.

Table II.—continued.

1. Years.	2. Periods of Five Years each.	3. Number of Persons living at commence- ment of each Five Years.	4. Gross Sum paid to Office dur- ing each Five Years.	5. Gross Sum paid by Office dur- ing each Five Years.	6. Surplus of each Five Years' Receipts over its Payments.	7. Deficiency of each Five Years' Receipts below its Payments.	8. Total Funds of Office at end of each period of Five Years.
61	13	400		5,000	0	1,200	23,400
62			3,800				
63							
64			88,400				
65	14	350		5,000	0	1,700	21,700
66			3,300				
67							
68			91,700				
69	15	300		5,000	0	2,200	19,500
70			2,800				
71							
72			94,500				
73	16	250		5,000	0	2,700	16,800
74			2,300				
75							
76			96,800				
77	17	200		5,000	0	3,200	13,600
78			1,800				
79							
80			98,600				
81	18	150		5,000	0	3,700	9,900
82			1,300				
83							
84			99,900				
85	19	100		5,000	0	4,200	5,700
86			800				
87							
88			100,700				
89	20	50		5,000	0	4,700	1,000
90			300				
91							
92			101,000				
93				100,000			
94							
95							
96							
97							
98							
99							
100							

The surplus of £1000 arises from our having supposed, for the sake of a convenient number, £100 to be received on each death, in place of £101, and thus the 1000 insurers losing each £1, the balance of £1000 remains in the hands of the office at the end of the 100 years.

It is thus evident that a party would be perfectly assured of receiving the amount he insures, on the supposition of the duration of life we have laid down; and in order to secure a payment of £100 at death, the annual premium for a child just born would be £2.

The Premium by the Government Tables for Female Life,* and giving the insurer interest at 3 per cent., is £1; 13s. 10d.

2. *A Common Assurance purchased by a Single Payment.*

Let us now suppose that the party, in place of wishing to insure by payment of an annual premium, prefers purchasing the benefit by a single payment. We saw that by paying the sum of £50, 10s. on the supposition of no interest being made, an individual pays an exact equivalent to an annual premium of £1 during his life: and hence, in order to purchase a benefit such as the £1 per annum would have purchased—that is, £50 10s. payable at death—he must, if he wishes to secure that sum, make payment to the office of that same amount, or £50, 10s. This seems absurd enough, and would deter any man from entering into the transaction, although he might be quite willing to do so in the form of an annual payment. But the result arises entirely from our having left out the element of interest. It teaches, however, by exact accordance with the supposition on which it is based, the valuable lesson of not indulging in extravagant expectations of benefits to be derived by insuring.

The profits of an office, it is obvious, must arise wholly from the insurers themselves, by their payments, and the accumula-

* Henry, *Government Annuity Tables*, London, 1859, pp. 45, 740; *Government Life Annuity Commutation Tables*, London, 1866, vol. i. p. 18. As explained on p. 70, the above value is partly derived from English Life Table No. 1. (Age 0.)

tion of these at interest. So that while the insurance system never will produce to any man the immense prizes which he may by bare possibility obtain from a lottery, it is equally removed, in the steadiness and certainty of its returns, from the character of a ruinous gambling scheme, in which justice is done to no one, and by which probably 999 out of a thousand who engage in it are total losers.

By allowing interest upon the purchase money of an Assurance, there is created a wide difference between the sum required by the office and the amount guaranteed as payable; but notwithstanding, this mode of effecting the transaction is very seldom resorted to. The purchase money required by the Government Tables, Female Life (allowing interest at 3 per cent.), for an insurance of £100 on the life of a child just born, is £36, 14s. 10d.*

3. *An Assurance for a Short Period.*

A party often wishes to secure a benefit payable at his death, if it occur within a fixed number of years, say, for the sake of conciseness, one year. As on our supposition there are 1000 persons alive at the commencement of the year, all aged 0, and of these 10, or the one-hundredth part of the whole, die during the course of the year—holding that there were to be insured for them all, in a similar manner, £100 each—the sum that would require to be raised, since 10 die whose relatives claim, for each, £100, would be £1000 in all, and this would make the contribution for each, at the commencement of the year, £1. If a child whose life is to be insured is aged 0, or just born, £100 may therefore, by the payment of £1, be secured, and will be paid in the event of the infant dying within one year. By English Life Table No. 1, the premium is £12, 17s. 6d.: there is no Government Table for age 0, but English Life Table No. 1 is used, at age 0, to supply deficiency.

* As explained above, and in Case 3, this value is partly derived from English Life Table No. 1. (Age 0.)

We have limited our comparison, in the former instances, to children just born; but, as must occur to the reader, the calculation and fixing of the premium or annual payment to be made by a party of any age, from 0 to 100, is equally capable of being made out. In the present instance this deduction is peculiarly easy, and we shall therefore take the case of a man of 30, and determine the premium for a similar Insurance to the preceding, on his life.

From the foregoing Table it will be perceived that the number of persons living at the age of 30 is 700; these persons therefore would require, seeing that 10 will die during the course of one year, to make up the sum of £1000, to be paid in sums of £100 each to the relatives of the 10 persons deceasing, and the contribution from each would be the seven hundredth part of £1000, or £1 and three-sevenths of £1, equal to £1, 8s. 7d. each. We have seen that the payment for a child just born is £1,—the difference arises from the greater risk, or what actuaries term the greater probability of death, according to the artificial Table assumed, but not according to real Tables. Again, if the age were 40, the number living being (as shown from the Table) 600, and there being £1000 to be made up, the annual premium would be the six-hundredth part of £1000, or £1, 13s. 4d. For age 50 the premium would be £2. By the Government Tables, Female Life, at 3 per cent. interest, the premium for Assurance of £100 for one year on a life of 30 is £1; on a life of 40, £1, 3s. 4d.; on a life of 50, £1, 7s. 8d. The values are the result by equating the payments by taking, for example, for age 30 the actual premiums for ages 29, 30, and 31, and dividing by 3. The Government Female Life Table, being, as well as the Male, not subjected to the process of graduation, the results for one year's insurance present apparent anomalies, which disappear when equated as in above. The word anomaly is, however, used simply with reference to divergence from an increasing premium with increasing age. If we take ages for the same Table and sex, 48, 49, 50, 51, the non-equated premiums are £1, 12s. 3d.,

£1, 11s. 4d., £1, 7s. 4d., and £1, 4s. 5d., which, although decreasing as the age increases, are not anomalous viewed with reference to nature. Similar characteristics appear in same Table, at ages 40, 41, 42, where the non-equated premiums are £1, 5s. 3d., £1, 2s. 11d., and £1, 0s. 10d.; also at ages 6, 7, 8, 9, 10, while the non-equated premiums are 19s. 3d., 14s. 6d., 11s. 1d., 8s. 10d., and 8s., which last is the lowest in the whole Table, indicating the highest stage of health to be at age 10.

The reader will pardon this apparent digression, but the matter is sufficiently important to justify attention being directed to it.

Supposing now that a party wishes to insure for a longer period—say 5 years, and that his age is 30. The number living at that age by the table is 700. We might suppose them any other number, and decreasing by any percentage annually, but as the table affords a ready means of checking the accuracy of our deductions, we prefer it. As the number dying is 10 annually, and the relatives of the 10 receive £100, or £1000 annually for 5 years, the total amount that would require to be made up by the 700 individuals, in order to secure, in the event of the death of any one or more of the number in 5 years, £100 for each, would be £5000. From the table it appears that if the 700 were each to pay £2 per annum for 5 years, the total amount would be £6800. We might deduce this sum readily, from considering that if all were surviving to the end of the 5 years, the amount would of course be £700, multiplied by the number of years 5 and by the sum 2, or £7000, the difference arising from the dropping of 10 individuals per annum by death. As £5000 is the sum wanted, and £6800 is produced by making the parties pay £2 per annum each, the latter sum appears to be too much, and reducing it in the proportion of the difference, 1800 to 6800, we find the annual premium about one-fourth less, or £1, 10s. 9d. for each individual. The annual premium by the Government Female Table at 3 per cent. interest would be £1, 0s. 7d.

4. *An Assurance purchased by a Definite Number of Payments.*

It not unfrequently happens that an insurer wishes to pay up the whole amount required from him by the office, neither in one sum nor in annual payments during life, but only during a fixed period of years, without any obligation for the continuance of the payment even during that period beyond the term of his own life, so that upon his death, at whatever time, whether within the fixed period for the payment of premiums or beyond it, the sum insured shall be paid to his heirs. Take, for example, the space of 10 years. A person assuring wishes to pay in as much during that period, as will enable the office to guarantee the payment of £100 to his family whensoever he may die. We may take his age at 30. At that age there are by the table 700 living, and, as we assume, all wishing to pay up in 10 years a sum that will enable an office to pay £100 to each of their families on their decease. £70,000 is thus the sum that will require to be provided. And as appears from the table, each paying £2 per annum, £6800 would be accumulated during the first 5 years, and £6300 during the second 5 years, or £13,100 in the whole period of 10 years. But the sum required is £70,000, and the parties would therefore require to increase their contributions to more than five times the former amount, which was £2, or they would require to pay exactly £10, 13s. 9d. The premium required by the Government Female Table at 3 per cent. for the same insurance, would be £4, 13s. Supposing the age were 40, the premium deduced by our table in the same way would be £10, 16s. 3d. for each, and by the Government Female Table at 3 per cent. £5, 8s. 10d. If the age were 50, our table's premium would be £10, 19s. 9d. for each; and by Government Female Table at 3 per cent., £6, 10s. 5d.

5. *Endowments.*

Take now the case of a person who wishes to make an Assurance, not upon his own life in case of death, but to insure a sum payable to himself on attaining to a fixed age. This may

be done for another : as when a father wishes to provide £100 to his child, just born, upon the child's attaining 20 years of age.

Again, having recourse to our supposition of 1000 children, just born, for each of whom it is intended to procure similar sums on their attaining the age of 20,—it will be observed from the table that the number who attain the age of 20 is 800, and that the total sum to be provided is thus £80,000. Supposing there were to be paid for each child, as by the tabular supposition, £2 per annum, the amount of contribution for the

First 5 years is	£9,800
Second 5 years is	9,300
Third 5 years is	8,800
Fourth 5 years is	8,300

Or during the whole period of 20 years, £36,200

As the sum is not one half of the £80,000 required, each child will require to have paid for him or her more than double the sum of £2 per annum, or exactly £4, 8s. 5d. The amount by the Government Female Table, at 3 per cent. interest, is £3, 5s. 6d.

If the age of the child were 5 years, we would now suppose that there were 950 of the same age, and as 800 would survive from among those to 20 years of age, the same sum would require to be provided, and the contribution of £2 per annum for each, yielding for the

First 5 years,	£9,300
Second 5 years,	8,800
Third 5 years,	8,300

Or for the whole period of 15 years, £26,400

The contribution thus required would be about thrice the contribution of £2, or exactly £6, 1s. 3d. By the Government Female Table, at 3 per cent. interest, the sum would be £4, 18s. 3d.

Supposing the age of the child were 1 year, and the £100 insurance to be receivable on completing the age 21. We

have by the table gross sum paid to office for the insured up to the completion of the age 20, . . . £36,200

But as those entering at age 0 are excluded, we must deduct their payments, . . . £2,000

Again, the payments for those living at commencement of age 21 must be added, viz., 800 at £2 each, 1,600

400

Making up fund available, . . . £35,800

But by the table, 790 completing age 21, £79,000 is required—that is, more than double the £2, or exactly £4, 8s. 3d.

The premium by Government Female Life, 3 per cent. interest, is £3, 6s. 3d.

It would be easy to multiply examples, but as the same principle regulates them all, we shall only notice another instance, where, as occurs in practice, parties who have attained to manhood insure in this manner a sum payable on their attaining to an advanced age. Say that the age to which a person has attained is 25, and he assures the sum of £100, payable on his reaching 55 years of age. Our table shows that 450 individuals attain to that age out of 750 alive at 25. There is thus £45,000 to be provided by these 750 individuals, and contributing £2 per annum each, the amount raised during the

First 5 years is	£7,300
Second 5 years is	6,800
Third 5 years is	6,300
Fourth 5 years is	5,800
Fifth 5 years is	5,300
Sixth 5 years is	4,800

Making the total contribution in 30 years amount to	£36,300
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But as £45,000 is the sum to be provided, the parties will require to contribute one-fourth more than the £2, or exactly

£2, 9s. 8d. The annual premium by the Government Female Table, at 3 per cent. interest, required for the same risk is £1, 19s. 4d.

6. *Assurances of Sums payable at Death, or on attaining a Certain Age.*

A mode of Assurance which has become more common than formerly, is to provide a sum payable not only on the death of the party, but payable also in the event of his attaining a certain age. To prevent misconception, it may be observed that the sum is only once payable, and at the period which first occurs, whether of the death of the party, or his attaining the fixed age. This is just adding an insurance, such as we noticed in the last example, to an insurance in case of death in the same fixed number of years,—for the risks are quite distinct and independent of each other, and to compensate (1) the additional advantage given to an insurer in case of death within a given term, of having his sum assured payable upon his surviving to the end of that term ; or (2) a party insured in the event of attaining to a certain age, obtaining the further benefit of the amount on his policy being also payable in the event of his death, the proper premium deduced in either case must be added.

To make the case more plain, it must be considered that, suppose 1000 children just born to be insured for £100 each, to be paid in the event of their dying within 20 years, as the number, by the table, dying annually is 10, the total number dying in 20 years would be 200, and at £100 each, the sum to be provided would be £20,000 ; but if the office undertake, in addition to their former risk, to make the sums insured also payable in the event of the parties attaining to 20 years of age, this makes it a certainty that the office will be called upon to pay £100 to each of the 1000 assured, or £100,000 in all, and they must therefore receive £80,000 additional for the risk. This sum will be found to agree with the sum stated in the first case in No. 5, though brought out in a

different manner, and thus proves the accuracy of the system of considering the two risks in the manner done.

In finding the annual premium payable for a sum of £100 to be paid by the office to a person on attaining the age of 20, or before that period, at the date of his death, if that should occur, the same simple considerations as have guided us in the former instances suffice. From the table it will be perceived that 1000 children just born, or aged 0, having £2 per annum paid for each of them for 20 years, the sum total of their contributions will amount to £36,200. But the value of the risk undertaken by the office, or what may be also called the worth of the benefit receivable by the parties, is, as we have seen, £100,000, or nearly three times greater than the amount of the contribution of £2 each; so that the parties would require to pay nearly £6, or more exactly £5, 10s. 6d. each. By the Government Female Table, at 3 per cent. interest, the annual premium required for the same risk is £5, 2s. 4d.

We may here give one example more in a class of cases which are more numerous in occurrence and more important in the amount of interest involved; that is, of persons who have attained to maturity, insuring in a similar manner a sum payable on their reaching an advanced age, or dying before that age, the sum being, as before, only once payable. Say that the age of the party is 25, and that he wishes to insure £100 payable on his attaining 55 years of age, or at his death, if it occur in 30 years, the period between 25 and 55. By the table it appears that the number living at 25 is 750. As before remarked, we might suppose any number living at that age, and decreasing as we have made these 750 decrease; but as the table saves computation, we take 750 as the number living. As these 750 must either attain to 55, or die before reaching that age, the office would be certainly called upon to pay the £100 to each in the course of 30 years, or £75,000 in all. The contributions of the parties, as shown by the table, would,

	£7,300	} £36,300,
	6,800	
at £2 each, amount in 30 years, to	6,300	
	5,800	
	5,300	
	4,800	

and as this is not quite half the sum required, the contribution of £2 each must be a little more than doubled—more exactly, it would be £4, 2s. 8d. each.

If we wished to show the precise coincidence of this result with the other mode pointed out of valuing the benefits separately, we have only to take the last article (in No. 5), where the annual premium for the insurance of £100, payable on the event only of a party aged 25 attaining to 55, is shown to be £2, 9s. 8d.; to this we add the annual premium required from a party aged 25 for insuring £100, payable in the event of his dying before attaining to 55 years of age, which, after the manner of Case 3, we will shortly deduce. The number of persons alive at the age of 25, being 750; and 10 among these dying each year, in 30 years 300 will die, and at £100 each, the total sum required to be made up so as to insure £100, payable in the event of each of any one or more of the 750 dying within 30 years, will be £30,000. The annual contributions of the 750 at £2 each, are as shown by the table. For

First 5 years,	£7,300
Second 5 years,	6,800
Third 5 years,	6,300
Fourth 5 years,	5,800
Fifth 5 years,	5,300
Sixth 5 years,	4,800

Or, for the whole period of 30 years, £36,300

But the sum required is £30,000, so that about one-sixth less than the £2 need only be taken from each, or exactly £1, 13s., to which, adding £2, 9s. 8d., the annual premium

for the risk of the party attaining to 55, we have the same sum, £4, 2s. 8d., which we have found immediately before in an independent manner. The premium by the Government Female Table, at 3 per cent., for the same risk would be £2, 14s. 3d.

7. Assurances by Increasing Rates of Premium.

By the last column of the table given, the state of the funds of a society formed of 1000 children just born is exhibited at the end of each year. The variation appears considerable. At the end of 50 years the funds are at the highest point, and the society would be said by some to be in the highest state of prosperity. The fact is, that they are able to meet their engagements; but they were equally so at any intermediate stage from the commencement, and will be so to the end. It has been thought by some that such a great accumulation of funds is not desirable; and accordingly schemes of ascending rates of premium, or sums that vary every year, commencing with a small sum, and rising higher and higher, have been proposed for the convenience of the public. In one or two instances the offices have offered rates that increase from birth to death, and which they state are exactly proportioned to the varying risk of each year.

In the great majority of the ascending scales of premium however, the period during which the rates increase is limited to 15 or 21 years, and during that period they only increase thrice, and remain stationary at the lapse of the period to the end of life. Adopting our table as the basis, we shall give an illustration of the mode in which this may be affected with perfect security to the assured; but as the actual rate of mortality is not ascertained with that exactness which we have supposed in the table, and as the interest of money varies, it is necessary to observe that the Insurance Offices cannot, with due regard to their safety, come to the mark of taking premiums, which, on the calculation of their own tables, would

precisely exhaust their coffers at the end of each year, as we propose to do.

The surplus at the end of the first year, is by the table £1000, or one-half of the sum paid in. The contribution was £2 each, and if we wish to leave no balance in the treasury, we reduce the first year's contribution to £1.

The second year's surplus is £980, being £20 less than the former surplus. To make the contribution this year only £1 each, would leave a deficiency of £10; and as we propose to have at the year's end, neither surplus nor deficiency, we assess this £10 upon the 990 individuals living at the commencement of the year, which is 2d. each additional, making the total contribution for each £1, 0s. 2d.

The third year's surplus is £960, a deficiency of £40 upon the first year's surplus. Assessing this upon the 980 persons living at the commencement of the year, we find 5d. to be added to the first year's contribution, making the whole £1, 0s. 5d.

Pursuing the subject in the same way for the successive periods, we find the premiums which would answer the demands made upon the office annually, and leave nothing over.

The premium,

At the end of 20 years, would be	.	.	£1	5	0
„ 40 years „	.	.	1	13	4
„ 60 years „	.	.	2	10	0
„ 80 years „	.	.	5	0	0
„ 90 years „	.	.	10	0	0
„ 99 years „	.	.	100	0	0

The great increase in the latter part of this scale is its most remarkable feature, and strongly illustrates the general principle of Life Assurance, that those who live long cannot gain by it, and that the invention has been employed for the benefit of those who are prematurely cut off; and properly so for those more fortunate who are spared to advanced age, may, in the general case, be supposed to have accumulated a com-

petence from the produce of their own industry exerted through that long period.

But to return to the comparison of the equal premium and ascending premium, it will be seen that the relatives of the individual who attains to 100 years, and has paid to the office on the equal premium system, at the rate of £2 per annum, or £200 in all, receive £100, and thus a loss of £100 is sustained by the transaction. But by adopting the system we have exemplified, the last survivor would have to pay about £520 and his relatives would receive only £100, the loss being £420 in place of £100 as before.

It is true that the total to be paid by all below 90 would in no case exceed £240. The great burden upon the few last survivors is the consequence of the increasing risk, and as their previous payments have only gone to make provision for others, they can receive no deduction on that account. According to the Government Female Table, at 3 per cent. interest, the premiums for the first year (age 0) for a similar risk would be £12, 17s. 6d., for the 50th year (age 49), £1, 11s. 4d., and for the 90th year (age 89), £27, 1s. 4d.

We may now give an example of the scale of premium that rises once every five years, for three terms of five years each, and then at the end of 15 years from its commencement, becomes uniform for the rest of life.

The principal requisite is to have the commencement always greater than the risk for the first year.

Practically now this is not of so much importance, the mortality of the first five years experimentally being a good deal below the average.

However, we shall assume a figure for the commencement equal to the risk of the 5th year.

That is—

For the first 5 years, per annum,	.	£1	10	4
„ second 5 years, „	.	1	16	4
„ third 5 years, „	.	2	2	6
For remainder of life, „	.	2	2	6

F

Now to show that this scale is just, we refer to the table, and find that at age 30

The living are 700, and yield

During first 5 years at £2 each,	£6,800	
Reducing this in proportion to £1, 10s. 4d.,		
it becomes		£5,145
During second 5 years at £2 each,		
we have	£6,300	
Reducing this in proportion to £1, 16s. 4d.,		
we have		5,722
During third 5 years, at £2 each,		
we have	£5,800	
Increasing this in proportion to £2, 2s. 6d.,		
we have		6,163
Lastly, we have for remainder of life at £2		
each, at end of table, . . .	£101,000	
Less amount up to age 45,	70,200	
	<hr/>	
	£30,800	
Increasing this in proportion to £2, 2s. 6d.,		
we have		32,725
Now the sums to be provided at age		
30 is	£101,000	
Less sum in table, ac-		
cumulated to age 30, . . .	51,300	
	<hr/>	
	£49,700	£49,755

The difference of 55 in the result is of no moment, as it represents a fraction of less than a penny, and no nearer approach can be made.

By the Government Female Life, 3 per cent. interest, the premium is

First 5 years,	£1 7 4
Second 5 years,	1 12 10
Third 5 years,	1 18 3
Remainder of life,	2 3 9

The premium for 1 year at age 30 is, by same table, at 3 per cent. interest, £1. Thus the scale is abundantly safe.

These premiums, valued for the respective periods, produce in the aggregate of the values £39, 1s. 3d., which is the single premium payable by same table, and rate for such an insurance.

We might give an example of a rate increasing septennially, but no good purpose would be served in doing so, as it would exhibit merely a change in the figures, the principle remaining the same.

The decreasing premiums are exactly the counterpart of the ascending or increasing, and are comprehended under the same general rule.

8. *Assurance on Joint Lives.*

A joint insurance is a mode often practised, and particularly useful to a husband and wife. Joint Insurances may be made in all the seven modes we have already gone over, but they are usually effected on the equal premium system; or an Insurance is made on two lives (there are seldom three or more) of a sum of £100, payable, to take the simplest case, on the termination of the joint existence of the parties, that is to say, when the first dies, and that is paid for by an equal premium, while the two continue to be both in life.

In a popular treatise, it is inadvisable to follow out a subject such as this case presents, advancing in intricacy at every step, and where the language of familiar exposition must of necessity give place to the symbols of algebra, in order to preserve any connection in ideas which would otherwise be lost in their multiplicity; and therefore it appears proper not to do more than indicate the principle which applies generally to calculations referring to more than one life. We have hitherto avoided making use of the word *probability*, as it involves considerations which, although recognised in all transactions, yet in an abstract point of view are apt to perplex the mind, and leave upon it a somewhat unsatisfactory conviction of their truth.

It is requisite now, however, to give an illustration of the meaning of the term, which we will attempt to do in the simplest possible manner. In the law of mortality given in the Table at p. 66, the number of persons dying in one year, out of 1000 just born, was given as 10, or 1 in 100, and in scientific language it would be said that the probability of the death of any one of the 1000 in one year was $\frac{1}{100}$, or one-hundredth, meaning one-hundredth part of absolute certainty. Some would be apt to say, how can you divide certainty, an idea of the mind, into parts? to which it can only be answered that, according to the law we have laid down, it is certainty that one shall die out of 100, and this proposition we represent and express by saying that the probability of any one dying is $\frac{1}{100}$.

To take the simplest case now of the probability of either, out of two individuals fixed upon among a number, dying. We shall say the whole number of individuals is three, and hold it fixed that one shall die in one year. We wish to ascertain the probability of the joint existence of any two of them being terminated by the death of either of them in one year. The parties we shall call *a*, *b*, *c*, and shall represent the case of any two surviving to the end of the year by *ab*, *ac*, *bc*, and the case of any two ceasing to exist together to the end of the year, in consequence of the death of either, by *Ab* (meaning that *a* dies, and that *b* lives to the end of the year), *Ac*, *Ba*, *Bc*, *Ca*, *Cb*. From a consideration of the circumstances there are evidently nine cases that can occur—1. *ab* jointly surviving to end of year; 2. *ac* doing the same; 3. *bc* ditto; 4. *Ab*, that is *a* dying and *b* surviving; 5. *Ac*, that is *a* dying and *c* surviving; 6. *Ba*, ditto ditto; 7. *Bc*, ditto; 8. *Ca*, ditto; 9. *Cb*, ditto. These being all the possible events, let us examine how many of them embrace the case of a particular individual, say *a*, not surviving conjointly with another—these are (1) *bc*, (where neither of the two that survive is *a*); (2) *Ab*, when *a* is included and dies; (3) *Ac*, where *a* also dies; (4) *Bc*, (where *a* is not included); (5) *Cb*, when *a* is also not included; or five cases in all of *a* not being found as surviving (or being found

as not surviving) conjointly with another. The whole possible cases are nine, and five being the number of these adverse to a 's surviving, we therefore say that the probability of a 's not surviving conjointly with another (or, which is the same thing, the probability of their joint existence ceasing) is 5-9ths. The probability found in the ordinary way would have been thus: for, two surviving out of the three, the probability of one surviving out of the three is $\frac{2}{3}$, two events out of three being favourable; and the probability of two surviving out of the three might be found in the same way—since taking a for survivor, he survives with 1st b , 2nd c , and 3rd lives when b dies, and 4th, does so also when c dies, to be 4 out of the whole number of cases, 9, or 4-9ths. This, it will be observed, is the square of $\frac{2}{3} = \frac{2}{3} \times \frac{2}{3} = 4-9$ ths, and however we may vary the number of individuals involved, the square of the probability of one surviving always represents the probability of two jointly surviving. Consider now that it is a certainty that any two should either have their joint existence terminated or not within the year, and the probabilities of these separately being $\frac{5}{9}$ and $\frac{4}{9}$; when we add these together we have 1, which represents that certainty. Thus if we have the probability of any two jointly living, then by deducting it from certainty, or 1, we have the probability of their ceasing jointly to exist by the death of either. In the Table the probability of a child just born surviving one year is represented by $\frac{990}{1000}$, or the number surviving divided by the number living at commencement. The probability of two jointly surviving would thus be represented by $\frac{990}{1000}$ multiplied by itself, or $\frac{990}{1000} \times \frac{990}{1000}$, or $\frac{980100}{1000000}$; and, deducting this from 1 or certainty, we have the probability of their joint existence terminating in one year, or $\frac{19900}{1000000}$. If £100 were to be insured, in the event of either of two children just born dying in one year, the sum required would be this last probability multiplied by the sum insured, £100, and the premium would thus be $\frac{1990000}{1000000}$,—nearly £2, or exactly £1, 19s. 10d. In the language we adopted formerly, since 19,900 die, the

sum to be provided by the million is 1,990,000, or nearly two millions, and hence the £2 premium. For the single life the premium was only £1. In the same way we might find the premium for succeeding years, but as the mode is the same, more exemplification is not required.

Insurances are also made in the event of one dying before another, and also on three joint lives, and on the various cases of survivorship that may occur in these.

In concluding the illustration of the different modes of insuring, it may not be out of place to make reference to the rates for what may be termed Infantile Insurance. In my work of the Government Life Annuity Commutation Tables,* I have specially referred to the enormous difference in the rate of mortality during the first five years of human existence experienced by the community at large, compared to the rate of mortality experienced by a particular class. The matter will be better understood by giving the Rates of Premium for Insurance during each of the first five years of life, as deduced at 3 per cent. interest, from the National Experience, as shown by English Life Table No. 2, and by the Government Female Table at same rate of interest. The latter represents the mortality of a select class, viz., that occupying a higher position in life with its advantages in the way of material benefits :—

Age.	Interest 3 per cent. Premium for Insurance of £100, for one year, by		
	English Life Table No. 2.		Government Female Table.
0	£15	9 7	£
1	6	6 10	1 5 9
2	3	10 1	1 14 2
3	2	7 11	1 14 6
4	1	15 7	0 19 11
5	1	6 2	0 17 8
The average premium for ages 1 to 5,			
	£3	1 4	£1 6 5

* Vol. i., Pref. p. xi.

Continuing the respective Tables for other five years, we have

Age.	English Life Table No. 2.	Government Female Table.
6	£0 19 5	£0 19 3
7	0 16 9	0 14 6
8	0 14 1	0 11 1
9	0 12 6	0 8 10
10	0 10 6	0 7 11
<hr/>		
Average premium for ages 6 to 10,	£0 14 8	£0 12 4

During the first period the National Average Premium is 2 and 3 tenth times more than by the Government Female Table, while during the second period the National is only one-fifth more than the Government Female Table result.¹

There is no Government Experience for the first year of life, and the children who had completed one year only numbered 264. Thus the two first years of life cannot be contrasted. In the subsequent years, the number of Government Female children subjected to observation increases by gradual stages from 540 to 3286, on which reliance may be placed.

Taking the facts as they stand, the important truth is deduced, that the advantage obtained by material support as between a select class and the Nation at large is very considerable, and if it were possible to raise the standard of living and give the advantages derived from its necessary accompaniments—better housing, better food, better medical treatment, the standard of existence applicable to the Nation at large might become an approximation to that at present possessed only by a select class. How this is to be accomplished presents a task well fitted to enlist the talent and skill of our best Statesmen and Political Economists. Information can probably be obtained from other countries that would be useful. The remedies that are required are no doubt both material and moral, as well as intellectual. Foremost among the moral is the influence of true religion brought to bear with greatly

increased power upon the community at large. Among the material may be instanced—measures to repress the greatly prevailing practice of adulteration in articles of food. The necessity for this is becoming clearer every year. Sir Robert Peel, by his Banking Acts about 40 years ago, effectually stopped the depreciation in value of Bank Paper caused by its multiplication beyond the requirements of the country—and a few drastic Acts applicable to articles of common consumption would be very useful at the present day. The Drink question is a very large one, and a great variety of views are entertained on the subject. It is very plain, however, that it is a duty of the Government, not sufficiently recognised in the past, to take steps for the protection of the public against the adulteration, or the sale in a raw immature condition of heavily taxed substances—and this, whether we look to what is incumbent in fairness to the consumers who thus pay so considerable a portion of the general taxation, or whether we regard the health of the community at large.

It would be most desirable for the preservation of our existence as a Nation, to have our standard in religion, morality, honesty, and truth advanced, a process which no one can affirm is going on, in the face of the Reports from our Courts of Justice, and of the melancholy condition of society, in important respects, which these reveal. In the declining years of the Roman Republic, Cicero was constrained to exclaim "*O tempora, O mores!*" and we know what followed,—the onward course of corruption in society, the loss of liberty, and the final catastrophe of ruin to the Empire, the effect of which was to throw mankind back in civilisation during five hundred years, from the barbarism of which ages European nations have taken fully that period and more to emerge.

Looking to the serious consequences, every man who has the welfare of his country at heart is imperatively called upon to contribute his best energies in order to effectually stem the tide.

To properly wind up this branch (before proceeding to the

next subject, Annuities), it is proper to state the relative extent to which the system has practically been made use of, in reference to the various modes of assurance offered to the public by the offices. We cannot do better than to present the same as exhibited in the last periodical valuation of an influential society, which will next year conclude a similar period.

The general result is that the Participating Policies—that is Policies taken out with profits—constitute, of the whole amount insured,

The Non-participating, or Without Profits Policies, amounting only to	94	per cent.
	6	„
	100	„

Again—The equal annual Premium system, contrasted with the rest of the system, makes up

While all other modes only give together	91½	„
	8½	„
	100	„

Endowment Assurances—that is, payable to the parties themselves, on attaining an age named in the policy, and in most cases payable also if death occur previously, make up, of the whole Insurances

There are only three other branches that need be referred to, viz. :—

Insurance by single Premiums—with Participation.

Insurance by definite number of Premiums—with Participation ; and

Insurance by increasing Premiums without Participation.

All the three do not altogether make up, of the whole Premiums, 4½ per cent., the first being the highest,—and the proportions respectively, 40, 37, and 23 per cent. of the quantity represented as above by 4½ per cent. of the whole insurances.

The lesson taught is abundantly clear that in the improving, by every possible means, the return to those insuring with or without participation in profits, on the equal annual premium scale, the benefits of life assurance will be the most advantageously communicated to the public.

In fact great improvements have been made—but perhaps, in causing the amount insured to be promptly payable to the party for whose benefit, or under whose control, the fund is to be placed, would be the most effectual.

A simple provision would be for the insured to endorse, on the duplicate policy preserved by the office, the name, profession, and residence of the party to whom, in the event of his death, he requests the amount in the Policy and profits, if any, to be paid, and the certificate of death from the Registrar might enable that party, if so provided, at once to receive payment of the amount due. It would, of course, be competent for the insured, at any time, to cancel the destination, and substitute another, if he so desired—and that by communication with the office, whose Register would be equivalent to a Register of Shareholders of a Company dividing profits, or to the Registers applicable to real Property.

We shall now refer to

9. *Annuities.*

Having now gone over most of the different ways in which a person may insure his life, or that of others, and explained at length the general principles that regulate the monied values of the benefits to be purchased, we will now take examples in the business of buying and selling Annuities on Lives.

A person wishes to purchase an annuity upon his life, the payment of which is to be continued annually (it may also be made payable half-yearly, or quarterly, and up to date of decease, with its equivalent, if payable half-yearly, of a quarter's annuity after death, as in the case of the National Debt Office Life Annuities), during the whole period of his existence. Say that we take his age at 60, and the amount of

the annuity, £2 per annum. Recurring to our first supposition of a number of individuals of the same age purchasing each a similar annuity, and turning to the table, page 68, we find the number which we shall hold as purchasing such annuities at 60 years of age is 400. As the case is precisely the opposite of an assurance—the office now *paying* a sum annually to each person in place of *receiving* it—we may take the sums stated in column 4 of the table, page 68, as being, under the annuity view, to be paid *by* instead of *to* the office; and thus we shall have from the table the total amount of all that will require to be paid by the office. The sum of column 4 is (page 68) £101,000

But as this includes the payments made	
to annuitants, previous to 60 years of	
age, we deduct these (page 67),	84,600
And thus get the total that would be	<hr/>
paid by the office to 400 annuitants,	£16,400

The sum to be paid by each for an annuity of £2 is therefore the four-hundredth part of the above, or £41 for an annuity of £2 per annum on a male life of 60; and for £100 annuity, the payment required would be £2050, and the annuity that £100 of capital would purchase is thus £4, 17s. 7d., and the annuity that £1000 would purchase, £48, 15s. 7d.

By the Government Male Table, at 3 per cent. interest, the price of an annuity of £2, age 60, is £19, 19s. 1d., and for £100 annuity the price would be £997, 16s., while the annuity that £100 of capital would purchase is £10, 0s. 5d., and the annuity that £1000 would purchase is £100, 4s. 5d. For a female of same age the corresponding values would be, by Government Female 3 per cent. Table, annuity £2, price £22, 16s. 3d., for £100 annuity, price £1140, 12s., annuity that £100 would purchase, £8, 15s. 4d., and that £1000 would purchase, £87, 13s. 6d.*

* Full tables for £1 annuity are given in my Government Annuity Tables, pp. 1 and 45; Government Life Annuity Commutation Tables, vol. i. pp. 5 and 18.

These are the rates at which the Corporation of Manchester, during 23 years, from 1859 to 1882, sold life annuities, accompanied with the additional advantage, for which no charge was made, of the annuities being payable half-yearly or quarterly, and also up to the date of the annuitant's decease.

During about the same period, the National Debt Office (holding £97, 12s. 6d., an average price of Consols) charged to a Male £100 for annuity of £9, 8s. 1d., and to a Female on the same capital that Office allowed £8, 1s. 2d.

The prices charged by the National Debt Office were thus, for the age in question, about 7 per cent. above the Manchester Corporation rate, on which the latter had sold about one million and a third sterling in purchase prices. My conviction was that the annuities sold by the National Debt Office under the Tables of 1829, and continued up to 1884, were overcharged to about that extent on the Female life, being two-thirds of the annuity business of the National Debt Office, an opinion not altered by the Report on the National Debt annuities published in 1884. I valued, at the request of the Manchester Corporation, their annuities as at 1877, December, and found them, as regards Females, to be a class low in vitality, and must record my dissent from the conclusion of the Government Actuary that the Corporation sustained a loss of £100,000, or any such sum, by their transactions in Life Annuities.

The Corporation no doubt erred in paying annuities half-yearly without additional charge—but in paying up to the date of decease, also without charge, they were only following the example of the National Debt Office, up to 1884. The Report I made to the Waterworks Committee of a loss of £5457 as at 1877, December, according to the Government Annuity Tables, at 3 per cent. interest, was a guide for the future, and showed the expediency of charging the annuitants for the advantages hitherto enjoyed without payment—also of limiting the annuities to those having interest in these, and adhering strictly to the Table.

As regards annuities on Joint Lives, it will be seen that the explanations given in reference to Assurances on Joint Lives are available for the proper understanding of the principle on which the Purchase-Monies of annuities are fixed. The relation of the two parties, in the case of annuities, is, as already mentioned, simply the reverse of that under a Life Assurance, the office being now the receiver of the principal, representing the value, and that at the outset, and making the payments periodically instead of receiving them thus. In a manner similar to the foregoing, and to what is stated on Assurances on Joint Lives, we might therefore deduce the purchase money required for an annuity to continue during the joint existence of two lives, which, as the chance of the joint existence being discontinued, is greater than that of a single individual dying, would be less than that required for an annuity in a single life. As the deduction, however, would draw out to a tedious length, and is besides not necessary, we omit it.

The value of an annuity of £1 per annum on two joint lives, a male and a female, each aged 60, and also during the life of the survivor, is, by the Government Tables before referred to, at 3 per cent. interest . £13 17 10

This is derived from the value of the

Annuity on the Male Life, £9 19 7

The same on the Female Life, 11 8 2

21 7 9

Less value of annuity on their

Joint Life, . . . 7 9 11

As above, . . .

 13 17 10

Value of £1 payable during longest life of
a female aged 60, and another female
aged 30, after extinction of male life
aged 60, £12 0 9

An idea may be formed how this value is derived from a consideration of the formula, $B + C - BC - AB - AC + ABC$, when the values of annuities, single and joint, are represented by the capital letters employed, single and combined, according as the annuity is on the single life, or on the combined joint) lives.

The annuity for B added to the annuity for C would be too much, as it is only a *single* annuity that is payable. There then is necessarily deducted the value of an annuity so long as B and C live jointly. But it does not commence until the death of A. Therefore there is also deducted the value so long as A lives jointly with B, and also so long as A lives jointly with C. But it is obvious that, by deducting these quantities, we have deducted three annuities from the two annuities preceding, and that for the whole period during which B and C can possibly live. This suggests an addition, which is the annuity for the period during which A, B, and C are jointly in existence. Thus we have the formula for the right solution of the question. It is hoped this explanation will be deemed intelligible and of use.

Let us now take a final case—say of a father aged 60, A, a wife aged 50, B, a son aged 20, C, and a daughter also of that age, 20, D.

What is the value or purchase money for an annuity of £1 per annum, payable during the longest life of the wife and son and daughter, after the death of the husband (and father)? Representing these values as before, we have the formula, $B + C + D - BC - BD - DC + BCD - AB - AC - AD + ABC + ABD + ADC - ABCD$.

Working out this lengthy formula by the same table and rate of interest, and taking the figures from the tables in Government Annuity Tables, Vol. I., and from the Government Life Annuity Commutation Tables, Vol. IV., before referred to, we have

Positive Values.		Negative Values.	
Single.	Joint.	Single.	Joint.
B 14·948	BCD 11·568	0	BC 12·742
C 20·020	ABC 7·708		BD 13·386 ABCD
D 21·710	ABD 7·998		DC 16·668
	ADC 8·315		AB 8·513 = } 7·216
<u>56·678</u>			AC 8·886
	<u>35·589</u>		AD 9·252
			<u>69·447</u>
Summation.		Summation.	
56·678		69·447	
<u>35·589</u>		<u>7·216</u>	
92·267		76·663	
	92·267		
	<u>76·663</u>		

Result, 15·604 equal to £15, 12s. 1d.

Taking a general view of *this* complicated formula with reference to the preceding formula, it will be seen that it observes the same general arrangement, and it is not necessary to attempt to follow it out with explanations, as done in the previous example.

The three joint lives values were found by approximation, but the four joint lives value was taken from the book, and thus rigidly determined. On comparing a test approximate value of this last, it was found that the divergence of the true value from the approximate value was only '65 per cent. greater than the approximate result. The error on the whole at the utmost, therefore, supposing that, in the four possible cases, that is, where three lives occur, the error was always on the same *plus* or *minus* side, it would be limited to '63 (being less than one-half) per cent. of 35·589, equal to about four shillings and sevenpence, or $1\frac{1}{2}$ per cent. of the final value deduced.

Supposing the transaction extended to a sum equal to a thousand times our result—that is to £15,604—the possible error would then be £234, and, considering the probability of the errors balancing each other, it would scarcely be worth while, even in that case, to calculate strictly the four values here

deduced by approximation. Of course it could be done, but, in practice, I do not think it has ever been demanded.

The business of life annuities is conducted on a much smaller scale than the business of life assurance in this country. The principal office for the sale of life annuities has been the National Debt Office, but in the form of Tontines; the life annuity business stretches back to 1693, in reference to the transactions of the British Government. Until the Corporation of Manchester, and also the New York Life Assurance Company, commenced the sale of life annuities, the business of the National Debt Office exceeded the business of all the Insurance Offices dealing in annuities, put together. It is evident from the facts stated by the National Debt actuary in Report of 1883, coupled with what was known from Report by his predecessor, published in 1860, that the business of that office has, even up to 1875, been a good deal curtailed. The operations of the corporation and company above referred to, having been on the most extensive scale after 1875, it is likely that the decrease in the life annuity business of the National Debt Office has continued since. The business of the New York Life has been upon a larger scale than that of the Manchester Corporation, and their united operations, in a single year, have, it is believed, exceeded the transactions in life annuities of the National Debt Office.

From the consolidated account of the New York Life, in Return to Board of Trade, published 1885—

Consideration for Annuities for 3 years ending 31st December 1883, is	£1,021,220
Being an average at the rate per annum of The Corporation of Manchester during 5 years, ending 31st December 1882, received Consideration for Life An- nuities,	£340,000
	£800,000
Being an average at the rate per annum of	160,000
Consideration, per annum, together	£500,000

According to the Report¹ of the National Debt actuary, of 1860, before referred to, there was received, as estimated, during 5 years ending 1859, . £2,733,501

Being an average at the rate per annum of £546,700

which somewhat exceeds the total business of the Corporation and Company as in preceding statement.

However, it is quite certain the above rate of business has not been maintained, the falling off, there is ground to believe, being to the extent of one-third of the sales, which would reduce the transactions of the Government to a less amount, considerably, than the transactions of the two bodies referred to.

However, in consequence of the advance in purchase-price of annuities made by the Corporation, which under the advice of the Government actuary, has adopted the Government prices of life annuities, there has been a considerable falling off in the Corporation's life annuity business.

The New York Life Insurance Company sold life annuities without distinction of sex, according to the Carlisle Table. That company was, however, aware that the mean of the Government Tables' expectation of lives of males and females was coincident with the Carlisle,—Thus, if the purchase-prices of the annuities, by males and females respectively, were, as was the fact with regard to the operations of the Corporation of Manchester up to 1877, nearly equal, the company would be practically dealing with life annuities according to a table derived from the experience of life annuitants.

It is a reasonable presumption, in the circumstances, that the company was alive to this consideration, and therefore held themselves safe in their dealings in life annuities, whether estimated according to the Carlisle Table, without distinction in prices for males and females, or by the Government Tables with distinction in such prices.

The New York Life has also, however, made a change, by now

¹ Pages 68, 69.

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having separate tables for Male Life, as compared with Female Life, and, further, by advancing the price of the annuities.

The effect in their case, as well as in that of the Manchester Corporation, appears to be a reduction in the amount of business transacted.

The total amount of annuities paid by 83 offices in the United Kingdom, as reported in Board of Trade Returns for the year 1879, was £460,329

It is obvious, however, from the smallness of the respective amounts, that about the half of these offices do not deal in life annuities.

The Board of Trade Returns published 1886 give total amount of annuities paid in one year by 80 offices, 633,091

Consideration for annuities, received in one year, £644,274 and that by 48 offices.

Setting aside those of the latter whose sales are under £1000, the offices practically dealing in life annuities are reduced to 41.

These do not include the Corporation of Manchester, nor the New York Life, nor the Equitable U.S.A.

The office receiving the largest amount, in Consideration for annuities (purchase-prices), is the Liverpool and London and Globe,—amount for 1884, £130,699,—which office is the second in amount of annuities paid annually for that year, being £69,925.

The next in importance is the Gresham, the Consideration being, for 1884–5, £85,900, and the amount of annuities paid, £89,232. .

It is understood that a considerable portion of this is Foreign business.

Judging from the proportions of annuities of four companies, of which three are the largest dealers, who keep separate Annuity Fund accounts, the amount of annuity funds held, at the end of 1884, by the British offices, was upwards of six millions sterling.

10. *Reversions.*

To finish the course of illustrations, nothing more remains but to notice the subject of Reversions, meaning thereby, in its simplest form, a sum which at some future period will be paid to a given party and his heirs, upon the death of another party. The only event which must happen in order to make the sum payable is thus certain, although indefinite as to the period when it will come to pass,—being the death of the party during whose life the money is retained. As it may often occasion great inconvenience to an individual and his family to have no power of making use of such a fund, it is a considerable benefit to be able to turn to a Reversion Company, who will be ready to give him the immediate benefit of his remote interest, by purchasing it, and paying down the price, taking the risk upon themselves of the Reversion being deferred from becoming profitable to them for however long a period. In the instance in question, our table affords a ready means of illustrating the mode in which the benefit is valued, when a transaction takes place.

We have already remarked that, contrasting an Assurance paid by an annual premium with an Annuity, the office comes, by its payment of the annuity, into the same position in which an insurer stands to it by his payment of an annual premium; and the one case can therefore be estimated by the other, as we have done under Example 9. Similarly, the seller of a reversion holds the same relation with regard to the office, that the office does with respect to a party paying for his insurance in one sum (called Single Premium). Or, an office, in granting policies, may be said to sell reversions—for the policies are in nothing different, being payable upon an event happening, which is certain to come to pass, although indefinite as to the time; and the party who sells a reversion to an office does the same thing as to convey a policy of which the purchase-money has been all paid up; such a policy being neither more nor less than a reversion.

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To proceed with our example, assume the age of the party, during whose life the reversion is not available to those to whom it is destined, to be 60; say that the amount of the reversion is £100. Holding again that there are, as the table shows, 400 persons alive, at the age of 60, upon whose deaths the same number of reversions, of the like amount each, will become available to the proprietors, the total value is £40,000; and this sum, or £100 each, would be the price to be paid by a company purchasing, if the element of interest were left out of account, which of course is never done in any transaction, and the value therefore must be considerably modified below that sum by the introduction of interest.

But if the company, in place of paying down a sum at once, grant an annuity payable until the death of the party selling the reversion, as the element of interest is left out on both sides, the results of the table come much nearer to actual transactions. The £40,000 would purchase annuities to 400 individuals of the age of 60, of the amount of £4, 17s. 7d. to each annually, as shown under Example 9. The actual value of the reversion, by Government Female Table, 3 per cent. interest, is £63, 17s. 4d., and at 3 per cent. interest this would purchase an annuity of £5, 12s. Leaving out the element of interest, the transaction becomes so simple that to go into an explanation of it seems an unnecessary expenditure of words. But it should not be forgotten that, in their simple parts, all propositions, however involved and difficult to understand, resolve themselves into axioms, the truth of which, though admitting of no proof, is intuitively recognised, and hence the propriety of showing the real simplicity of a transaction which appears to many to be involved in difficulty, so far as the due application of the interests of the parties is concerned.

Reversions are, however, of many kinds, and depending upon various contingencies. In a party, for instance, bequeathing to his brother a sum of money, if that brother should survive him, we have a case of contingency, for the period is not only

indefinite, but uncertain of its ever arriving, as the legatee may die before the testator. The remotest instances, however, are capable of being calculated.

In the Disentails of Entailed Estates in Scotland, it is necessary for the parties interested, who may comprehend at least four individuals, to value the respective interests, in reference to chance of survivorship, of all these parties. Such cases are also complicated by the possibilities of the different substitute heirs of entail, after the proprietor, or heir in possession, having children. The uncertainty involved in such circumstances was illustrated in a recent case, finally decided in the House of Lords during the chancellorship of the late Earl Cairns, after a full investigation by the Court of Session, with the assistance of an actuary, who furnished reports upon the values of the Life Contingencies involved. In the Court of Session the amount awarded to two of the secondary heirs was only about the fourth part of what was obtained on the final decision in the House of Lords.

When the contingency involves more than the happening of three events, the value is very small, unless the reversion be very large, and few offices would be disposed to treat in such cases. It may also happen that the circumstance of one of the parties (who must be survived by another) having children, would defeat the benefit to the legatee, and there are no certainly ascertained tables to guide the offices in affixing a value to such contingencies. The consequence is, that the offices will not treat in such cases; private individuals may, but the transaction becomes then a mere speculation, without any definite basis to rest upon, such as the sure foundation of well-ascertained facts, on which the calculations of a Reversion Company are placed.

Government has thought proper to cause the expediency of a National Compulsory Insurance scheme to be considered by a Committee of the House of Commons, who have taken evidence upon that subject. Whatever may be thought of the merits of such a scheme, it seems as appropriate for the

Government, in connection with the National Debt office, and its operations for the reduction of the Debt, to purchase Reversions, as well as to sell Annuities or to grant Assurances.

If the Government were to purchase reversions, a more certain means of reducing the National Debt might be found than in the sale of life annuities. The holders of reversions would transact, it is pretty certain, upon terms that would yield a larger profit than the sale of a life annuity. It might also be carried further, by commutation of the price of the reversion into a life annuity payable by the Government, in many cases that would offer themselves. However, no movement has been made in this direction, and the project is therefore not one likely to draw the attention of the Government. Yet were a scale fixed that would be just, and also perfectly remunerative, there is the certainty that many and important transactions would take place to the mutual benefit of the Government and the parties concerned. In the course of half a century or less the effect of such operations would be manifest, and the scheme now in actual operation for the reduction of the National Debt, by the annual application of above five millions sterling raised by taxation, would be materially assisted by a kindred scheme. Government makes only 3 per cent. interest, or a somewhat less rate by the present operations, but advances made in the purchase of reversions could be calculated to return a much more remunerative rate of interest. With these observations we would conclude this rather lengthened chapter.

CHAPTER FIFTH.

THE VARIOUS SYSTEMS FOLLOWED BY THE OFFICES IN THEIR
MODE OF DIVIDING PROFITS.

ANY one who has happened to look through the advertisements of an Assurance Company, must have observed the continual recurrence of the words "With Profits," and "Without Profits;" "With Participation" and "Without Participation," as applied to the figures or monied values ranged in columns. It is very generally understood, by those at all conversant with the business of Life Assurance, that the several Companies and Societies make Returns to Insurers of other sums than those insured, and by way of addition to these; but the cause why any such return is made at all, and the reason of making such a return in any particular mode, are, in the general case, almost wholly unknown.

Many may be inclined to doubt the propriety of an office making any greater charge for a benefit than is simply sufficient to cover the risk incurred; and, looking at the matter in a mercantile point of view, may be of opinion, that, the bargain once made, there should neither be any call upon the insurer to pay more than the stipulated premium, nor, on the other hand, any obligation upon the office to pay more than the amount of the stipulated benefit. If, it may be urged, any other bargain is made, the transaction, in place of being like any other affair in buying and selling, settled entirely at the time of purchase, comes to assume more the appearance of a matter of chance, by the undefined amount of the benefit to be realised.

Besides, the fact of an Assurance Office contracting to pay a definite sum, viz., that stated in the Policy, and, in addition, an indefinite sum, viz., a portion of the profits made upon the Policy, which is generally termed *Bonus* (a word from the Latin, meaning simply a good or benefit), is a sure indication that the office has charged the insurer a sum in addition to that which is sufficient to meet the risk ; for it is clear, from the nature of the transaction (see the Table, p. 66), that the profits of an office, if any, can only arise from the premiums, and from these being in excess above the true premiums which would meet the risk and no more. Why then do not the offices charge that premium and no more, which meets the amount of risk run ? Why do they demand a premium which they know to exceed the just amount required ? Would it not be much better to draw no more from any man than the sum sufficient to provide for the benefit he contemplates, and leave him to employ his money in any other way he deems more profitable ? These are questions that must occur to those who make the subject in any degree a matter of consideration.

In order to a more full understanding of the difficulty, we shall, however, before proceeding further, give a brief view of the manner in which that difficulty has practically presented itself in the accumulations of funds of Assurance Companies, beyond what was required to meet the benefits granted, and which has thus necessarily brought on the consideration of the question of Division of Profits.

As already stated in another chapter, the first Society which made any distinguished figure in the business of granting assurances on lives was the London Equitable. The Amicable Society existed long previously, but as its system was rather that of a Tontine than of a Society granting assurances, it cannot properly be referred to. The Equitable, at its outset, proceeding on the London Bills of Mortality, charged premiums 50 per cent. higher than those now generally required, or even than those now charged by itself. That

office also, for some years calculated that there was a double risk upon female lives, and young lives of either sex. The number of individuals who joined the Society in the earlier part of its existence, and retired from it without receiving any return—having allowed their Policies to expire from non-payment of the premiums—was also considerable, amounting to some thousands. The mortality also found to prevail among its members, especially among the younger and more numerous portion, was found to be much less than that given by the Northampton Table, from which the premiums charged were deduced from about the year 1780. This operated a reduction of the premiums from the scale used in preceding period from 1762, so as to reduce the rate to about 25 per cent. above their present premium, but the premiums were still, as may be inferred, considerably above what the actual rate of mortality among the members of the Society would have warranted.

From all these causes, it happened that at the first investigation into the affairs, that is, upon making up an account of debtor and creditor, the Society being debtor on the one side, for the value of all the benefits granted by it, estimated by its tables at the date of the investigation, and creditor on the other side, by the then value of all the premiums payable by the Insurers, estimated by its Tables, and by the net amount of other funds in hand or invested at the time, it turned out that there was a balance or surplus of considerable amount in favour of the Society, after setting aside enough to satisfy every claim.

Here then arose a question, not as to whom these profits belonged, but how they should be divided among the members of the Society; for it was clear that no other person or body but the Society, or members, as they then existed, had any right to them; all those formerly connected with the Society having either died, and had the amount of their Policies paid to their relatives, or having cast off their connection with the Society, by allowing their Policies to expire from non-payment

of the stipulated premium (there being in those early days no idea, at least in a practical form, of allowing the assured, even in the worst case, the benefit of grant of a Free Policy proportioned to its then value). The mode in which it was resolved at that time, and also at a subsequent period, to divide the surplus, will be immediately stated, it being expedient here to take into view the proceedings and condition of other Companies who in the interval between 1762 and 1810 had been established.

When these other Companies or Mutual Societies which adopted the same Table, the Northampton, for the calculation of Premiums, as the Equitable had done, came to determine the state of their affairs, they found the same result as that experienced by the Equitable, in being possessed of a Surplus Fund to a considerable amount after all claims had been satisfied by setting apart their values. Some of these offices, in the division of their surplus, adopted the plan of the Equitable; others, reasoning upon the subject, thought they saw an improvement, and a nearer approach to equity, in a modification of the plan of the Equitable. Hence sprang up so many different systems or ways of dividing profits, and, as will be seen, the offices in 1842, at the date of the publication of the first edition of this Handbook, were scarcely further advanced in agreement upon this subject of dividing profits.

It was an early feature of the business of Life Insurance, that mercantile men, perceiving the great accumulation of funds that took place under the system, began the formation of Companies which would, by embarking their capital in the business, be able to realise profit by reducing the business of insurance to the simple exchange of a future benefit for an annuity, present and to come; that is to say, that would offer to insure fixed benefits at a fixed ratio, so that an individual should have no more or less premium to pay, and no more or less benefit to receive, than those stipulated in the original bargain or Policy. It was necessary to charge a lower amount of premium than that charged by Societies giving profits, and

these "Proprietary Companies" accordingly offered their fixed benefits at lower rates than could be prudently done by the Mutual Assurance Societies.

The public thus obtained the benefit of two modes by which they could protect themselves from the pecuniary effects of the uncertainty of human life. The one mode, that with *profits* or with *participation* (both terms have the same meaning), offering a provision that would turn out to be greater or less according to the particular mode of division of profits and the length of life enjoyed, but never below a fixed sum; the other mode at a lower rate of payment, and limited to a *fixed* sum, which no future circumstances would either increase or diminish.

In the examples we have given of the various ways of insuring, there is no reference made as to the way in which this may be done with regard to profits, whether with participation or without participation, as the consideration of these subdivisions naturally followed the general principles of Life Assurance transactions; but it may be observed that, on the proprietary system, all these different ways may be adopted, the alternative of participation in profits being confined to those who insure—(1) on the Equal Premium for life system; (2) on the system of Annual Premiums ceasing on the assured reaching a specified age, say 50, 55, 60, 65 or 70 years; (3) on Annual Premiums ceasing at such age, but securing payment at that age of the sum assured, or previously, if death so occur; (4) on Single Premium being paid, or Premium during 3, 5, 7, 10, 15, 20, 25 or 30 years; (5) on Half-Premium payable during first five years, and Double Premium during after lifetime; (6) on Increasing and Decreasing Scale of Premiums, during 15 or 21 years, and by quinquennial or septennial stages, thereafter uniform premium for after lifetime. In short, it may be held that, *except* for periods of insurance only for 3, 5, 7, or 10 years, an insurance may be effected almost in any practical form with participation in profits. In Mutual Offices, however, profits on ascending scale

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are not given except when the premium on the lower scale continues only for five years, and *then* commencing the participation.

In making any remarks as to the expediency of adopting the profit or no profit system, we do not give an opinion upon the two systems, or intend in any shape to indicate that we deem either system preferable to the other. This is a matter that must be left wholly to the insurer. Both systems we consider as presenting advantages to the public, and either system by itself could not supply those wants, or benefit the public in those ways, which actual experience shows, are frequently required to be supplied and necessary for the public interest.

The mode of division of profits pursued by the Equitable, being the oldest Assurance Association, will now be considered, as it naturally presents itself as the first to be taken under review. On a reference to the Table given, page 66, and the 7th exemplification of the modes of making an Assurance, it will be perceived that, with respect to an individual who insures £100 on the equal premium system, the utmost loss he can sustain is £100, throwing out of account the element of interest and assuming the given rate of mortality. But upon the principle of an annually increasing premium, it is apparent that four times that loss may be sustained, although in the general case not more than one-half additional loss will be suffered. If we were also to reckon the interest upon the sums paid, the difference would become much greater, both between the amounts given, and the amounts under the new supposition—and between the new amounts themselves.

In consideration of the great loss that is sustained by the individuals who preserve the longest connection with an Assurance Office, the able Actuary of the Equitable Society resolved, in dividing the surplus or profits among the assured, to favour most those old insurers, and thus, as much as possible bring to the ratio of an equality the advantage derived from the Society by all classes of insurers. To make these

advantages equal in every instance would, of course, have been subversive of the principles of Insurance; as it is perfectly obvious, that if one party dies at the age of 1, and there is £100 paid in consequence by the Society, only £2 having been received by them, the remaining insurers must pay the loss of £98. With regard, therefore, to the principal sums assured, there was no possibility of diminishing these, but, as respected the profits accumulated, the office had complete power to divide these among the insurers, as seemed most advisable.

As regards increasing premiums with profits, it will be observed that the increase being only once made, and that after the lapse of the first five years, the possible discrepancy is thus greatly limited. So far from favouring any such mode, however, the Actuary of the Equitable resolved to diminish as much as possible the share of profits to those who died early, even though paying the equal annual premium for the whole of life. To effect this object he fixed the period of investigation to be once in every ten years, and excluded from any share of profits those who died within that period, so that the representatives of a party assured during nine years, and who had paid on the equal premium system a sum much more than sufficient to meet the risk of his dying, would receive (or rather his executor) no more than the principal sum assured, if he were to die before the tenth year of his Policy was completed. Of course this would take place from his having assured immediately after a division of profits had taken place, say after December 1849, when the last but three decennial divisions was made. However, it became a custom with those insured in the Equitable to take out a ten years' Policy with any other company, so as to secure this valuable addition, in case of their failure to survive the period of ten years; and the Society now order an *annual* addition to be made in respect of Policies which may become claims between the decennial periods of division. Thus these Policies partake in part at least of the profits made in every year, and do not now entirely

lose the benefit of the period survived during the interval of ten years, through the Policy-holders failing to survive the next ensuing division.

To illustrate the principle more fully, take the case of a child just born (aged 0), insured for £100, and dying between the ninth and tenth years of insurance; say also that the life was insured immediately after a decennial division of profits. Upon the equal premium system, by Table, at page 66, there would be £18 paid to the office, but upon the annually increasing scale, which would yield as much as would be equal to the risk run by the office, the payments commencing with £1, the sum corresponding with the first year's risk, and ending in the ninth year with £1, 2s. 2d. for that year's risk, would amount only to £9, 9s. 9d. The difference between that sum and the amount paid, £18, being £8, 10s. 3d., is actual profit to the office, as in 1000 or 10,000 instances of the same description, it would, on the average, realise £8, 10s. 3d. from every case. Now, according to the original scheme, the Actuary of the Equitable resolved that in this case, the party thus paying nearly double what was absolutely necessary for him to pay, should have no share of the profits, these being reserved to those surviving to a greater age.

The particular mode of dividing the profits was as follows:— In December 1879 the clear *Surplus* Fund amounted to £1,893,704, whereof the sum of £1,231,876 was (in conformity with the principle observed in previous divisions, of *reserving one-third* of the whole profits) appropriated in Additions to the sums in the Policies (along with Bonuses previously declared), amounting, as Reversionary Sums receivable at death, to £1,753,574. The *one-third* reserved, being £661,828 (a little more than one-third), was retained for security and future distribution. This was a very much larger amount than the reserved Fund of any similar institution. The Equitable adhering to the Northampton Table, and to the system of reserving a third of the profits at each decennial division, has no parallel, and thus it is not possible to institute any just

comparison between it and any other similar institution. Its apparent claim to confidence and support, from the division in 1879, of the large sum of £1,231,876, and the reserve made of £661,828 for security and future distribution, must be judged according to the views that may be entertained of the wisdom and benefit of adhering to the Northampton Table, and of reserving one-third of the entire profits at each decennial division. The Funds of the Society amounted to upwards of seven millions sterling, as at 31st December 1855. At 31st December 1884, the latest Report to the Board of Trade, they amounted to £4,257,613. Thus, after an interval of 29 years, the Funds of the Society exhibit a reduction of nearly 39½ per cent. In the future course of this great Society a natural interest is taken, even by those who neither belong to it nor approve of the principles upon which it has long been conducted. At the decennial investigation which takes place on 31st December 1889, we have no doubt that full consideration will be given to the Society's future as well as to its past, and we trust the result will be to extend its influence and to increase its business.

The particular mode of division pursued after 1816 by this Society was, that the division of profits should be confined to the Policies that were then existing, until the number of these should decrease below 5000; when for every Policy lapsing, or being paid on becoming a claim, or being surrendered, and thus reducing the number entitled to profits below 5000, a Policy not previously admitted to profits should now be added, so as to keep the number of Policies among which alone profits are divisible always 5000, or below that number. It is also to be understood that the profits divisible among those whom we may call the Incomers, were to be given only for the first year of entrance within the 5000, and subsequent years, and not from the date of the Policy.

In reference to the sum of £1,231,876, representing reversionary additions (that is, sums receivable at death) amounting to £1,753,574, divided in 1879, it was divided

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among the limited number entitled to participate, viz., 3863 Policies, according to various scales of liberality, at so much per cent. of the Policy, for each year of its subsistence as a privileged Policy, and going back always to date of admission to the privilege.

Take the oldest Policy, dated between			
January and April 1817, say, of	£100	0	0
Additions made up to 1869,	£171	10	0
Addition made in 1879, being at			
rate of about £1, 11s. per cent.			
for each of 62 years,	96	0	0
		<u>267</u>	<u>10 0</u>
Sum, as at 1st January 1880, payable			
under Policy,	£367	10	0
Additional sum payable, if Policy become			
claim after payment of Premium for			
1885, being £2, for each of the 6 years			
1880-85,		12	0 0
		<u>£379</u>	<u>10 0</u>
Total sum payable at death if in 1885,			
Take now a Policy, dated in 1874, for like			
amount,	£100	0	0
Additional sum payable, if it become claim in			
1885, as above—			
£2 per cent. for years			
1875-79,	£10	0	0
£2 per cent. for years			
1880-85,	12	0	0
		<u>22</u>	<u>0 0</u>
Total sum payable at death if in 1885,	£122	0	0

Among the privileged there are differences of privilege.
For example—

All insured for £100 each, under Policies dated during 8 years up to 8th March 1825, participate according to first case given above, but under reduction of £10 for each year short.

Under Policies dated from 8th March 1825 to 2nd Nov. 1842, $17\frac{3}{4}$ years, reckoned as 10 periods, and under *further* reduction of £7, 10s. for each period short.

Do. from 12th Nov. 1842 to 31st Dec. 1859, 17 years also reckoned as 10 periods, and under *still* further reduction of £5, 10s. as above.

Do. from 31st Dec. 1859 to 31st Dec. 1869, 10 years, under similar reduction of £3, 15s. for each year.

Do. from 31st Dec. 1869 to 31st Dec. 1874, 5 years, under like reduction of £2, as above.

Do. from 31st Dec. 1874 to 31st Dec. 1879, 5 years, under like reduction, but of £4, as above.

Finally, for Policies dated during 6 years 1880–85, there is the general statement that an *annual* addition is always ordered in respect of Policies which may become claims during the decennial periods of division, provided *six* premiums shall have been paid.

The number of Policies being now under 5000, there is no delay in entering into the privileged class, but with above qualification. On retrospect it will be seen that, to guard the Fund of the Society, the first protection is a six year's probation, without which no profits can be obtained.

The next security is five years of the smallest allowance of profits. In the five following years the allowance of profit is doubled, and thus it increases periodically as the number of years duration of a Policy increase.

The Society's Funds having been, during the great war of 1793 to 1815, chiefly invested in Government Stock, these Funds received the advantage flowing from the general peace. Purchasing, say, at the middle period, 1804, when the Funds were at $56\frac{1}{4}$, and realising in 1855, possibly, when the Funds were at $89\frac{1}{8}$, even on the supposition that the Society only

invested the equivalent of half the stock then held (in 1855), the profit would exceed two millions sterling. They had, besides, the benefit of the high rate of interest yielded, being, to them, $5\frac{1}{2}$ per cent. This was probably the cause of the bye-law of the Society, in 1816, limiting the profits to those on the Roll, as the number of the Policies then exceeded, by some thousands, the number of 5000. The effect of it was still further to carry out the original view of the Actuary of the Society, to render the returns to the assured as equal as possible, looking to the age of the Policy; and at the division in 1839, the latest dated Policy received within the 5000, was in 1816, so that 23 years thus elapsed, and the party only received £2, 10s. in all of addition for each £100 insured. The greatest addition made in 1839 to any Policy was to one opened or commenced in 1777, the total additions to which amounted, for every £100 insured, to £637, making the sum payable at death, for every £100 insured, £737. At that date (1777) the Society proceeded on the London Bills of Mortality Experience at 3 per cent. interest, and supposing the age of this party to have been 30 at the date of entry to Insurance, the Net Annual Premium for £100 would have been £3, 6s. 9d., and this paid annually for 63 years, from 1777 to 1839, would amount, at 3 per cent. compound interest, to £587. Now £737 is paid, or a gain of £150 results, and as the Society had paid every individual dying before that period at least the amount of his Policy, this shows that the rate of profit made by the Society has been more than 3 per cent. interest. Calculating the £3, 6s. 9d. per annum to increase at 4 per cent. compound interest, we find that in 63 years it amounts to

to	£869
The sum paid is	737
And in this view the individual named	<hr/>
sustains a loss of	£132

on every £100 insured. This view of the interest realised, it is obvious, is much nearer the truth than the other; for it is totally impossible for a Society to pay to every man insured with

it a greater sum than that received from him, when accumulated at the rate of interest at which it has improved its capital.

The peculiar situation of the Equitable, in the great amount of lapsed policies, for which no surrender values were paid, and the high improvement of its funds by the change in the value of its extensive investment in Government Stock after the war of 1793–1815, makes it difficult to estimate the rate of improvement of its funds at interest, but that it must have been somewhere about 5 per cent. seems pretty clear from what has been stated. According to Return to Board of Trade, after division of profits in 1879, the average rate of interest on its investments, during ten years up to 1879, was £4, 3s. 1d. per cent. per annum. The state of matters in these years was altogether different from that between 1793 and 1815, contrasted with the rise in funded property after the latter year. It may be noticed, in further corroboration of the view of the Society's funds having been improved, with reference to the period referred to, at about 5 per cent. interest, that the highest amount stated as payable on any Policy, in event of its becoming a claim in or after 1885, going back to 1817, is £379 10 0

Whereas in 1839 there was actually paid 737 0 0

Difference, £357 10 0

Thus it is clear the day of such high Returns on Insurance Policies as in 1839 is past.

The Equitable allows the assured the option of receiving a sum in present money in lieu of reversionary Additions, or the application of their present value in reduction or extinction of the annual premiums.*

* As an indication of progress in human knowledge, as regards Life Assurance, it may be stated that, as Premium for Assurance of £100 with Profits on a life of age 30, there was charged, by Equitable, in 1771, £3, 18s. 7d.; in 1779, £3, 8s. 11d.; and average premium in 1838, was £2, 10s.; and is, in 1886, £2, 8s. 10d.,—being above 60 per cent. of reduction upon 1771 premium.

2. The next mode of division that has been brought prominently before the public, is founded on an objection to the former plan,—that the profits are retained beyond the time that suffices for the safety of the assured, and that a reduction of premium would be a greater benefit to the assured than an increase of the amount of his policy. It was resolved that no policy should be admitted to the benefit of participation in profits, unless it had existed for the whole period of 7 years; further, no sums were to be allocated by way of bonus, or addition to policy. At the end of the 7 years, the amount of profits being ascertained in the way we have generally pointed out, these are held to represent the values (1) of Immediate Annuities on the lives of all members then entitled to Reduction of Premium (the only way allowed of applying the profits); (2) of Deferred Annuities on the lives of the remaining members whose Policies had not yet reached the maturity of 7 years, such Annuities to be proportional to the Premium payable by each member respectively. Distinctions were also made among the members entitled, thus—69 per cent. being reduction on premium in respect of policies that have existed during 8 to 10 years; 79 per cent. is reduction in respect of policies that have existed during 10 to 20 years; 94 per cent. is reduction for policies that have existed from 20 to 29 years; and 100 per cent. on policies that have existed from 29 to 63 years, Further, when reduction amounts to above 100 per cent. the rate of 104 per cent. having been declared in 1885, the surplus above 100 is held by the Society, and will be paid with accumulated yearly interest when the policy becomes payable. The reduction is only for one year, a valuation and reduction being made annually. The reductions progress, according to the experience from 1877, at the rate of 1 per cent. of increase per annum.

By the results of the Office (the London Life Association) Valuation Balance Sheet as at 30th June 1885, the surplus is £107,283 over and above the net liability (which is £3,762,818), or 2·85 per cent. of the net liability.

Turning to the last Decennial Statement of the Equitable Society, viz., as at 31st December 1879, we find, in reference to a net liability of £2,466,957, a surplus of £1,893,704, of which was divided £1,231,876, leaving a reserve of £661,828, which is 26·8 per cent., or nine times the proportion which the London Life Association considers it proper to reserve (in both cases over and above the sum sufficient to meet the liabilities of the office).

Our object is limited to showing the different modes of dividing profits followed by the offices; but as, in the first edition, we have made some remarks on the subject of the comparative safety of the mode pursued by the London Life Association, we shall now recur to the subject. In 1840 the Edinburgh and Glasgow Assurance Company adopted the title of Life Association of Scotland, and their then manager proceeded to London, and consulted with Mr Joshua Milne, who referred him to Mr Griffith Davies, and the latter recommended the Equitable experience, published by Mr Morgan, as the basis for the future operations of the Company, and under the name adopted, its operations, it being a mixed proprietary, and the London Life Association a purely mutual body, have been so successful that its funds, as at 5th April 1885, amounted to £2,877,105, being within a million of its prototype. This showed the popularity of the system of the London Life Association with those who must be supposed able to judge, in a practical sense, of its merits.

As regards the Valuation of Assets of the London Life Association the seven first years' premiums of every policy have been included, and afterwards the original premiums for the 1st series, *minus* 17 per cent. thereof—73 per cent. of 2nd series, 58 per cent. of 3rd series, and 48 per cent. of 4th series. Thus there is *left out* of Valuation of Assets 17 per cent. of 1st series, 27 per cent. of 2nd, 42 per cent. of 3rd, and 52 per cent. of 4th series, so far as the years after the first seven are concerned. What the values of these may be we have no means of precisely knowing. It is clear that, in every policy opened with the Society, the premiums for the first seven years

are retained in the hands of the Society, with their accumulations from interest, as a fund to provide for any unfavourable change in the rate of mortality, of accumulation from interest, or from any other cause, which it is expected will never be so great, as that the seven years' premiums and interest shall not be more than adequate to meet it.

So far as the experience of the last 150 years' mortality in England is concerned, this plan seems to be abundantly safe, holding 30 years the average of age for insurers at entry, as it is, we believe, practically, the seven years' premiums are, by Healthy Males Institute Experience, more than one-fifth of the whole, or 20 per cent. Taking the Tables of Male Life Mean Duration given in vol. 2 of "Government Annuity Tables,"* p. 768, which embrace a wider range than English Tables, the differences between the highest and lowest, from age 20 to age 90, in Mean Duration, is only 11 per cent. This is also taking the more unfavourable supposition that the rate of mortality will increase, while the general impression is that it has been and is still decreasing. It is true that the possible fall in the rate of interest is an element that should not be left out of account. The experience of the last 100 years is here, so far as observation warrants, more uniform than in that of human mortality (according to different observations); for, with occasional variations, $4\frac{1}{2}$ per cent. appears to have been the rate of interest realised. Even though we were to assume $4\frac{1}{4}$ per cent. as the probable rate which Insurance Companies will, on the average, receive upon their investments, there seems no ground to apprehend that, in the succeeding century, Insurance Companies will be in less favourable circumstances, with regard to the interest they can make upon their money, than they are at present, and have been since their institution. The rate of interest allowed by Insurance Companies, in the calculation of the premiums exigible by them, is not more than 3 or $3\frac{1}{2}$ per cent. When they make additions to sums insured, or abatements from premiums, it is always upon the just principle of

* Page 768.

reckoning to make the same rate of interest as the above. The conclusion led up to by these considerations seems clear, that the system of reserving seven years' premiums and their accumulation from interest is a safe one, as regards even Associations who possess no funds apart from their premiums, and the accumulations from these. By the plan of the Equitable a much larger surplus is retained; for their periodical divisions, being once in ten years, and one-third of the surplus being retained, or say $4\frac{1}{2}$ years' premiums, this accumulates at the end of another ten years to $6\frac{3}{4}$ years' premiums, and in 1869, £585,000 being Third retained, and in 1879, £1,890,000, being surplus fund, rather more than $8\frac{1}{2}$ years' premiums (about £150,000 per annum being amount of these), may be held to be constantly kept in hand. The Equitable has a further security in the unvarying amount of premiums exacted; whereas an Association conducted on the principles of which we have just treated, by diminishing the amount of premiums exacted, may ultimately, if the Northampton Tables, as some maintain, indicate double the true risk, diminish its surplus, compared to the Equitable, in the proportion of 1 to 2.

The surplus of the London Life Association is an increasing one. At 30th June 1873 it was less than $\frac{1}{2}$ per cent., compared to the liability, which would make one believe the Directors had been too liberal in their reductions of premiums. But it is now maintained at nearly six times that proportion; and, increasing as it does, it is pleasant to see the advantages that flow from its system to the Assurers, after the not unreasonable delay of seven years. The Directors, in 1865, entertained no doubt of being able to continue the rate of advantage already secured by its participating Policy-holders, and they have succeeded in doing so.

The object, in this chapter, is not to attempt to reconcile the different ways of distributing Surplus followed by the respective offices, but to try to explain what these modes are, so far as the information furnished by the offices enables this to be done.

It is sometimes useful, when an opportunity is presented,

to contrast the practical results of the respective systems, and in reference to the Equitable Society, their Prospectus shows that, in a Policy for £1000 (age at entry not stated), opened 1825-26, the total amount payable (including the additions), in event of becoming a claim after payment of Premium due in 1885, is £2920.

The London Life gives the case of a Policy opened in 1826 for £1000, age at entry 35, and states that the same, along with the amount of Premium returned with compound interest at 4 per cent. amounts to £5717, as at 1st July 1885, held payable at death.

Now this amounts to nearly double the amount of the sum payable under the Equitable Policy, and the explanation that may be made from the London Life Premium per cent. for age 35 being £3, 6s., while that of the Equitable is only £2, 19s. 10d., is insufficient.

We have not the age at entry to which the Equitable statement refers, and if that age at entry were, as is possible, 8, then, looking to difference of Premiums, 57 per cent. would require to be added to Equitable amount, making it £4584.

The average rate of interest stated by the London Life, as yielded by its funds, is £4, 4s. 9d. per cent. That of the Equitable is £4, 0s. 11d., both in Report to Board of Trade, 1881. Effect being given to this difference, the Equitable's amount in comparison would be raised to £4800, leaving still a difference of £917, that is a difference of 19 per cent. in favour of the London Life, which can only be explained by the operation of the large reserve made by the Equitable in dividing its profits.

3. The next plan we shall notice is that by which, while the main rule of allowing the assured the option of having their shares of profit either—

- (1) Added as Bonuses to the sums assured, payable at death ; or
- (2) Deducted from Premiums payable either during life, or till the period of next division of profits arrives ; or
- (3) Received by the Assured in Cash now,

the reserve of one-third of the profits is practically done away with.

The ground for practically abolishing this reserve of one-third is—that the tables now adopted for valuation being based on the actual experience of a very large body, with regard to whom every fact of importance can be absolutely relied upon as having been accurately ascertained, it is, in this view, unnecessary to maintain a system, which was only justified by the uncertainty that formerly existed as to the practical correspondence of the Table of Mortality used, with the rate of Mortality experienced by the Assured.

Further, there was the evidence afforded by the results, in the number of deaths among the assured, during the interval between the divisions of profit, that the actual mortality experienced fell considerably short of that in the table now employed. Besides the above, there was also the additional security, that in case of a Policy being surrendered, during the intervals of divisions, no payment was to be made for it, in respect of Bonuses declared at last division, and, of course, when Policies were allowed to lapse, the Bonus fell with the Policy—also, if death took place in a fixed number of years of the period between divisions, the last declared Bonus did not vest—that is, fell not to be paid.

Thus the great practical advantage has been gained, it is considered, of dividing nearly the whole surplus immediately when the same has been ascertained.

The allocation of profit under this head is made periodically upon not only the original sum assured by the Policy, but also upon the Bonuses already declared thereon at the respective periods of division—the whole amount of Policy and previously declared Bonuses, as at date of last division, being held as the sum on which the Bonus of next division is to be declared, at so much per cent. thereon for each year, in the interval between the last and the next division.

The way in which the Amount of Profit to be divided is ascertained is thus—

The value of original sum in Policy and of amount of declared Bonuses thereon is ascertained by the Table, and at the rate of interest fixed upon (see Case 2 in Chapter Fourth, p. 69). This forms the *Debit* against the office. Then The value of the Net Premium (that is, the premium paid less the addition that is included thereon for expenses and for profits), according to the table used, at the age attained by the Assured at the date of the Valuation, is ascertained, being treated as an Annuity payable in advance during his after-lifetime (see Case 9 in Chapter Fourth, p. 90). This forms the *Credit* in favour of the office.

The difference of the two, necessarily on the Debit side, *i.e.*, against the office, is the amount reckoned as due by the office.

This process repeated for all the lives, and the results then added together, forms the total amount for which the office is held to be Debtor.

On the Credit side is—

The amount of Accumulated Funds possessed by the office at the date of division.

The difference of these two amounts is the surplus divisible, and which, as already explained, is, except a mere trifle, actually divided—that is, when added to Policy, the sum added, is, on average, about double the amount of the portion of surplus applicable—because not to be paid till after Policy becomes a claim. When cash is asked, then the allocated sum, if the age of the Policy warrants this, is paid. When the allocated sum is requested to be applied in reducing premium, the future premium is reduced accordingly.

Of all this, due notice, by printed statements, is sent to the Assured.

The above mode is adopted by the largest office doing business in Great Britain.

4. We come now to another way of dividing profits, which has been in use by a most successful office for about 50 years. We have seen, in the description of the three preceding modes a

striving after equalisation among the Assured, by encouraging most the parties who preserve, by extended lifetime, the longest connection with the office. This is argued by some to be against the principle of Life Assurance, as in the words of De Morgan, before quoted, "an agreement that those whose fortune it shall be to have more than average success, shall resign the overplus in favour of those who have less."

But the view taken under the system we are now to describe is the commercial one, that no man has any right to profits at all, until he has paid up the amount stipulated in the Contract as to be paid to him or his heirs, compound interest at rate allowed by the office, being accumulated on his premiums. This way of looking at the matter ignores the value of the undertaking by the Assurer to pay the premium, and, on the other hand, treats, as good as gold, the promise of the office to pay the amount insured when due. Nor does this system take any account of the fact that, in his early payments, specially during the first five years, the Assurer actually pays to the office a good deal more than the risk warrants, and thus accumulates profits in the hands of the office. The only consideration is simply—an Assurer dies, and to his heir is paid a sum exceeding the payments made to the office accumulated as above, and thus, it is said, the office sustains a loss. We confess an objection to this mode of singling out a case. Our view is, as was that of De Morgan, that of a Society of Members; and we would arrive at results, not by taking individual cases, but by regarding the whole operations of the Society directed to the common end of securing all its members from the pecuniary consequences of failure to attain long life. Premature death is, therefore, a contingency, against whose result, in a worldly point of view, the Society is constituted to provide, and the Society, in paying a Sum Assured and Bonus after a premature death, is simply doing what the members had agreed to do at the commencement. However, in the constitution of the Society to which we refer, care has been taken to place the scale of premiums with profits lower than that of any

other office, excepting three. Thus an immediate benefit is secured by the sum which the office *must* pay being made larger than any possible, with exception stated above. Taking ages at entry as from age 20 to age 45, the number of years to be waited before receiving any profits, appears, on the average, to be about 24.

In the division (which is septennial) last made, the amount reserved (which is fixed by Directors), of the Surplus Fund was one-third—and the other two-thirds profits were divided among Policies, the number of which was between a third and fourth of the whole number of Policies participating; while, as regards Amount Assured and Bonuses, the proportion in amount of Policies participating was one-fourth of the amount of the whole Policies (with Bonuses) participating. In reference to the reversionary Bonus as compared to its present value, the *reversionary Amount* was only about a half more than the present value, evidently pointing to the fact that the age of the participators was, on the average, considerably greater than the average in the case and mode of division immediately preceding.

The effect, from prolonged period of waiting, resembles the Equitable, whose example it also follows in reserving one-third of the profits for after-division. In the very low scale of its premiums, it departs altogether from the Equitable—the statement, being, however, that the former premiums were based on Government Male Annuitants Table, modified to strengthen rates at higher ages, while the premiums are now based on Healthy Males Institute Experience, in both cases at 4 per cent. interest.

In the success of the office is manifested a preference, on the part of the public, for low rates of premium, and on the part of the office, the reservation of one-third of the profits shows the feeling that it is necessary to combine that measure of caution along with the low rates of premium.

In the United States of America, which have confessedly adopted from us the Life Assurance system, the same result has followed as occurred in the Railway system when trans-

planted from this country to France. Although only apprentices in the trade, the French outdid their masters in grandeur of conception and constructive skill, by the Government laying down the lines, building them, and then handing them over, on lease, for a period under a century, to the Companies, who only supplied the rolling stock. Similarly, the Americans, in place of allowing each independent Company to prescribe its own mode of ascertaining the profits, by fixing on what table it chose, and what rate of interest it pleased, by State enactment laid down one Table by which the Valuation of Assets and Liabilities fell to be made, and one rate of interest according to which the calculations must be gone through. Further, also by State enactment, a separate Bureau was constituted, to which alone was entrusted the duty of making and of publishing the Valuations according to the prescribed Table and Rate. The offices were allowed to make such valuations, and at such rate of interest as they pleased, for ascertaining amount of profits—but the State Valuation was the sole legal standard by which the ability of an office to meet its engagements—in short, its solvency, was determined. Over and above, by the same State enactment an officer was appointed, with a suitable staff, and at fixed salaries, to perform the necessary work, the officer, called the Superintendent of the Insurance Department, being authorised to make all necessary inquiries, which must be answered, at the offices whose proceedings he was appointed to observe and regulate according to the State enactment. The cost of management of the Bureau was met by certain fees to be paid by the offices.

Thus a system much more nearly approaching to an effective check on the part of the State upon Life Assurance Companies was, from the beginning, set up in the United States, and hence Returns, which in extent of information, go beyond what is obtained in this country from the offices by Returns made annually to Board of Trade.

To particularise all the different modes of ascertaining and dividing profits would be a taste alike unsuited to the extent

of this work, and unnecessary as regards public utility—the object of the work being to indicate, so far as the subject comprehended in this chapter is concerned, the general lines of operation in use towards effecting the division of profits, and the special information, in a compressed form, bearing on each particular office, being furnished, so far as it has been found practicable to obtain the same, in the General Directory of offices which concludes the work.

We shall therefore give only one further illustration of the mode of dividing profits, and that in the case of the largest English mixed proprietary office—the Law Life Assurance Society.

They first proceed, as all offices do, to make out a Debtor and Creditor account, making themselves debtor for all the sums assured, valued at the Rate of Interest and according to the Table of Mortality assumed—in their case, 3 per cent. interest, and the table, the Institute of Actuaries Healthy Males; and creditor by the present value of all future Net Premiums, according to the same rate of interest, and by same Table, The difference was the Net Liability of the office, and termed the Reserve. They then calculated interest, presumed at the same rate, on all Premiums received, and the proportion that the combined amount bore to the balance ascertained as above, fixed the proportion of profit to be divided. It will be understood, although not stated in “Answers to Questions” in Return to Board of Trade, that the Net Liability ascertained, as first stated above, with the addition of all claims against the Company falling to be paid, is deducted from the whole existing Assets of the Company, and the balance constitutes the amount of Profit divisible.

Then the Policy-holders rank upon this balance according to the respective proportions brought out by the process described above.

It should have been mentioned that the Society (which is, as above stated, a mixed Proprietary Company) gives four-fifths of the Profits to the Policy-holders.

Above applies to Policies which have not previously shared in the profits.

As regards Policies which have previously shared in the profits, the process is simply to take the reserve, as ascertained at last balance, and bring it down with compound interest to the date of this balance, and to add to the amount the premiums received since last balance, similarly improved at interest. Next the present value of the Sum Assured and Bonuses previously declared is ascertained,—and the present value of all future Net Premiums being found, the last was deducted from the former amount,—and the balance struck. The proportion of the sum ascertained, as stated in last sentence, and the balance struck fixed the proportion of profit to be allocated to each Policy-holder, the *amount* of profit being ascertained in the manner before explained.

We must apologise for the complicity necessarily presented by this description. It will easily be understood that the explanation of the way in which one single Policy is assigned its share of profit is applicable to the whole Policies issued by the office, and therefore when one case is given, the explanation applicable to the whole is given.

Our belief is, that when a further Table of Mortality, to be ascertained from the old experience added to a further quarter century of experience of the older offices, is framed, the offices will, either voluntarily or by legislative enactment, adopt that Table and a uniform rate of interest, and of loading, or addition for expenses, and, if judged proper, also for *security*, but *none* for profits, and that thus the present complex system will almost altogether be abrogated. This will be a great boon to the public, as, by one and all the offices, less premiums will be demanded, and the exact adaptation of means to ends will make the question of dividing profits of much less importance, these being reduced to the smallest possible proportions.

With this reasonable expectation we will now close the Chapter.

CHAPTER SIXTH.

THE BENEFITS AND IMPORTANCE OF LIFE ASSURANCE.

THE great increase in the practice of Life Assurance during the almost half-century elapsed since the first edition of this Handbook was published (year 1842), would in the ordinary instance demand a much fuller statement, in reference to cases occurring in life which have been there epitomised. It is felt, however, that to attempt even a brief abstract of the different situations to which the advantages of Life Assurance are applicable, would extend this branch far beyond the limits within which the view must necessarily be confined.

Various statements on the subject occur in the Prospectuses of the Companies and Societies engaged in the business of Life Assurance, and as these may be assumed to be the most comprehensive, the most accurate, and the most recent, the following is submitted as a general statement compiled from that information. Afterwards the subject will be dealt with as pursued in the work of 1842, in all the more important and useful cases there submitted.

1. A person dependent on a life income, and without capital, is enabled to make an immediate and certain provision for his family. This presupposes the permanence of the life income—and, unfortunately, in many positions, independently of health, it is precarious. It would thus be the most prudent course to insure—say, on the ten premiums' scale, which would pay up, in that time (ten years), the full life premiums.

2. The owner of entailed property may make a suitable provision for his younger children. There is no doubt that

the statutory law makes a limited provision for younger children practicable as a charge upon the entailed property. It may be that the owner would wish such provision to be more extended, and here Life Assurance lends its aid.

3. A person A, entitled to property in reversion on the death of another person B, if A himself should be living, may secure the value of that reversion to his family, in the event of his dying in the lifetime of B. There is, by the laws of England and Scotland, in the general case, representation by the family of A, who would, notwithstanding his death as above, be entitled to succeed to the reversion. In some cases, however, this may not be applicable, and it may be the safe course here, to "make assurance doubly sure."

4. A Creditor, in cases where the liquidation of a debt may be dependent on the duration of the Debtor's life, may obtain an absolute guarantee for the repayment should death intervene. This may be extended to friends assisting in any commercial enterprise. They rely on the character of those whom they aid, that, if spared for the required time, the object will be successfully accomplished. But life is uncertain, and here again Life Assurance may be effectually applied. Those so aided should, of course, repay the life premiums if their undertaking be eventually accomplished.

5. Partners of a firm, from which a share of the capital may be liable to withdrawal on the death of a member, may secure payment of the amount from another source, thus leaving the capital undiminished. This points to Life Insurance on the largest scale. Nearly thirty years ago an important Bank, having its headquarters in the West of Scotland, had its shares held to a considerable amount by a firm extensively engaged in the iron mining and manufacturing trade. One of the partners died, and his shares, a large number, being thrown on the market at a time of general depression, had a considerable effect in producing the fall of the Bank, and a loss reckoned at millions. In such a case, the Bank might have made an arrangement for an Assurance Fund. The firm

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was perfectly able to take up the shares, but as an act of prudence did not choose to do so—though, by so doing, they might have saved the Bank.

Another assurance office points out that the wealthy are interested in providing against those contingencies to which various kinds of property must be always liable, such as estates in entail, lands held on lease on lives, and many others of complex character. Members of the learned professions, officers in the army and navy, merchants, tradesmen, and others, whether interested in property of the above description, or otherwise, have an interest to make insurance against the risk of life. Industrial Insurance is applicable to classes of Society who are not provided with the resources commanded by those we have enumerated.

Following on the above, besides the cases cited, a third office points out that marriage settlements may have their objects accomplished, as regards payment of provisions, by the aid of the Life Assurance System in Policies on the life of the husband or of the wife—also, that parents who have advanced capital to start their sons in business, may have the melancholy satisfaction of securing the interests of the rest of the family by insurance against premature death.

A very well conducted office shows the advantage of a provision for old age by a Policy, say, at age 30 of the assurer, and payable at age 60, or at death. In such a case we would recommend, as the more advisable, the payment of the premium to be fulfilled in a fixed term, say 10 years or 15 years, to guard as much as possible against the contingency of supervening inability to continue the payment of the ordinary premiums for the 30 years. It is further pointed out that, by Married Women's Policies of Assurance (Scotland) Act 1880, and Married Women's Property Act 1882 (as also by the English Acts which preceded them), such Policies are secured for the benefit of wives and children against the husbands' creditors.

A large London office describes succinctly the above procur-

able advantages from Life Assurance—also that clergymen and professional men may, by payment during short fixed periods, provide what is required—and that schoolmasters, tutors, governesses, and ladies engaged in business, may secure annuities commencing at advanced ages.

The preceding observations are taken, except the comments, which are those of the author, from the prospectuses issued in 1885 and 1886 by five London and one Edinburgh office.

The various situations, with regard to friends and connections, in which an individual may be placed, afford just so many examples of the applicability of Life Assurance.

It has been said of well-conducted Institutions, by an eminent writer, that they cannot be considered in any other light than as great public benefits, of which every description of persons may avail themselves with advantage, and a great mass of misery be avoided, by the sacrifice of a very small portion of annual income. Even the highest personages in the realm, not excluding royalty itself, may profit by these Offices.

In justice to ourselves, we have to observe on the remarks in the following three pages, that they appeared in the book of 1842, and that therefore the *parental*, and not the *filial*, character belongs to them, in reference to what has preceded. The writer was not, even at the time, aware that in collecting from the prospectuses the illustrations preceding, he was dealing to a certain extent with his own progeny—but such appears to be, in some respects, the fact.

To Clergymen, Gentlemen of the Learned and Literary Professions generally, to those holding Public Employments, and to all others whose incomes cease with their lives, Life Assurance is specially adapted and truly important. Their families are frequently reared in ease and indulgence, and in a greater or lesser degree they partake of the refined enjoyments of social life. But how lamentably is their condition changed when death deprives them of their natural protector; and want, with its attendant evils, embittered too by the remembrance of

better days, closes upon them, and completes their melancholy lot. Numerous instances of this kind we continually meet with. When these are recollected, surely no considerate person will expose those he loves to a similar calamity, while, by a moderate annual payment, he may *at once and lastingly* secure to them the possession of those comforts, and that respectability in society to which they have been accustomed.

To Military and Naval men, the utility of Life Assurance must be so apparent, that it is almost unnecessary to offer any argument in its support. Their lives may be said to be more chequered than those of any other class of individuals. Ever uncertain as to their place of destination; exposed to the chances of war and dangers of unhealthy climates, as well as to the perils of the sea, surely it behoves *them* more especially to avail themselves of the *sure* and *easy* means which Life Assurance offers, of making those provisions which affection and prudence dictate.

Merchants, and, indeed, all those engaged in precarious pursuits, from the highest to the lowest—he whose vessels interchange the productions of distant climates, and he whose occupation consists in retailing them, are alike interested in Life Assurance, and are imperatively called on, by the voice of prudence and duty, to avail themselves of its benefits.

Landed Proprietors, Farmers, Agriculturalists, and Leaseholders in general, are particularly interested in Life Assurance, which, however, is but little resorted to by them, from the want of perfectly understanding the great advantages it affords. How frequently does it happen that, on the death of a leaseholder, and the division of his property among his family, the successor to the lease is left in such limited circumstances as to be unable to hold the lease with advantage, and, thereby soon becoming embarrassed, is obliged to relinquish the lease, in the course of which his father had expended great sums of money. Now, if the father had insured his life, and bequeathed the policy to the party succeeding to the lease, he would have left ample means for

working the subject of the lease at a profit; and this consideration must suggest to all Leaseholders, more particularly, the propriety of insuring their lives, to obviate such ruinous consequences.

A Debtor who is unable to satisfy the demands of his creditors immediately, but who may have the means of liquidating the amount in a certain time, should he so long live, may, by the aid of a temporary Insurance on his life, offer a satisfactory arrangement; or, should his views fail in discharging his debts in the given time, and he or his creditors continue the Insurance, the amount will, by that means, be realised at his decease. The ruinous consequences of insolvency may, in this way, frequently be averted.

Post Obits.—Persons having issued *post obit* bonds may realise their amount, at the time they become payable, by insuring the life or lives on whose failure they become due.

Fines for the renewal of *leases*, determinable upon the demise of a party or parties, may be always realised, by insuring the amount on the life or lives in question. For example:—A *Copyhold Estate* may be rendered nearly equal to a Freehold, by assuring the life of the present possessor to the amount of the fine payable at his death.

And *Leasehold Property*, held on lives, may by it be rendered nearly equal in value to lands held in perpetuity.

Minors.—The guardians or friends of a person, who at a certain age will come into the possession of property, may obtain a security for advances made in the interim, by insuring his life until he shall arrive at the given age.

Marriage Settlements may be effected advantageously through the means of Life Assurance, particularly where the husband is engaged in trade. For instance:—Suppose a gentleman, twenty-five years of age, be engaged to a lady whose fortune is £3000, and that the whole be required to be settled on her at their marriage; let £1000 be vested in trustees, and with the annual interest (*say 4 per cent.*) insure £2000 on the life of the husband. The gentleman will thus obtain the command of £2000, and

the original fortune of £3000 will be still secured to the lady. If the husband be younger, a greater proportion may be left at his disposal ; if older it must be less.

These are some of the leading examples, and it is presumed they will suffice as illustrative of the excellence of Life Insurance ; indeed, it is almost impossible to detail the various ramifications of the system, or to give a complete view of all the advantages which it comprehends.

The most common and most frequently insisted upon case, is that of a married man with a family, who is able to save something from his earnings. If that sum, however small, can be certainly saved year by year, by its application to the purchase of what is called a Policy, but which we shall rather term, a benefit to be realised at death, his wife and family are enabled to rest with confidence upon the exertions of the husband and father, as amply adequate for their support, being assured, in the event of death depriving them of their protector, they will receive from the Office an equivalent for these exertions, even on the supposition of their being continued to the latest period of a moderately long life.

As practical examples of the advantages desirable from Life Insurance in these circumstances, the following actual instances may be cited :—

An Eminent Tradesman in London effected an Insurance for £2000, and *dying within the first year*, from inflammation arising from a cold, his widow and family were thus put in possession of £2000.

A Young Married Man, in the medicine business, opened a chemist's shop in the suburbs of London, and was induced by his wife's friends to insure his life for £1000 ; shortly after this the cholera made its appearance in the metropolis, and the party in question fell a victim to that disease. The assets of the deceased were little more than sufficient to pay his creditors, and had it not been for the Insurance on his life, his widow and family would have been left destitute ; as it was, however, they received from the Office £1000.

A Farmer, residing about ninety miles from London, having had his attention drawn to the subject of Life Insurance, one market day made a proposal for an Assurance of £500 on his life, which, after the usual inquiries had been made, was accepted, and the Insurance was effected. Singular to relate, during the carrying of the next harvest home, he was precipitated from one of his own waggons, by the horses starting forward while loading, and killed on the spot. His family received £500, which enabled them to carry on the farm.

Another case occurred in South Lincolnshire. A young man succeeded his father as agent for two landed estates, one of them of considerable magnitude. A friend of his, Inspector of Branches for a leading Life Office, took occasion on a visit to speak of the advantage of securing, at an early age, the fruits of a good permanent income, by a Life Assurance; his advice was followed, more especially as the father had died, from the effects of an accident, uninsured. The Policy was for £500. After about fifteen years he died suddenly from apoplexy. £650 was the amount paid by the Office, as sum insured and profits. The total premiums paid, without interest, amounted only to about £225.

A Young Man, in a public office, with an income of £200, having contracted marriage at the age of 25, very prudently insured his life for £1000. At the age of 29 he was unfortunately drowned in the endeavour to save his brother from the same fate. In this case four annual premiums had been paid, which, according to the rates of the office concerned, amounted in all to £83, 6s. 8d., and his widow and children received £1000.

A Legal Gentleman took out a Policy of Assurance for £1500 on his own life, and, having taken a severe cold, ruptured a blood-vessel during a paroxysm of coughing. This occurred after two annual payments only had been made, and his family, of course, received £1500.

We may now take the case of a husband, who, without a family, wishes to make a provision for his wife in the event of

his dying before her. A woman, in the present state of society, is, in the common case, very dependent, having comparatively few means of providing for herself; and hence the propriety of providing for a contingency which is at least equally likely with the survivance of the husband. But here it will be urged that a wife may not survive her husband, and that the money paid away for securing from an event which does not happen, will be a total loss. If an Insurance Company were not to take this into account, it would undoubtedly be against the interest of any individual to make such an Insurance. It is proper, however, to state, that the Insurance Company always deduct from the premium, or annual payment to be made to them for such Insurance, a certain sum, which they consider equal to the *chance* of the husband surviving his wife, and thus the annual payment is, on the average, only about half what would be required for an Insurance on the life of the husband or wife separately. Where the ages of the husband and wife, as frequently occurs, are equal, the annual payment for an Insurance payable to the wife, if she should be alive upon the death of the husband, is exactly one-half of the payment that would be required to insure the same sum, payable absolutely upon the death of the husband, without any further contingency being required to happen for that purpose—such, for instance, as the wife's surviving her husband. A qualification must, however, be mentioned, which has come into operation since the publication of the Experience of the Institute of Actuaries, viz., that women, up to the age of 50, are charged an additional five shillings per cent. upon the sum in the Policy, over and above the ordinary premium. If the husband be possessed only of an income arising from his exertions, and have no real or personal property, which would be adequate for a provision to his wife, the system of Insurance presents the only means by which the object can be effected.

The tranquillity of mind in regard to means of support, either arising from the present possession of what is permanently sufficient for that purpose, or from a Policy of Assurance is, and must

be, a powerful auxiliary to rendering the married life a happy one. Upon the whole, the sooner an Insurance is effected after a marriage the better, for the younger the ages the lighter will be the burden ; and once people get into the habit of saving a sum annually, to be paid for their benefit, the more easy will it become in after life, and at last will be felt no more burden than is entailed by the purchase of necessary provisions for a family.

A great authority has remarked, that a man in contracting marriage, gives bond to society for his good behaviour towards the world ; and with equal truth it may be said that a party already married, in making an Assurance, gives bond for his good behaviour to the partner of his life, and to his offspring, and adds another inducement on his part to cultivate order, sobriety, and diligence in business.

The following practical examples of the use of Life Assurance in the situation we have remarked upon, may be useful :—

A Clergyman, aged 30, possessed of an income of £500 per annum, and married, without a family, desirous of securing his wife in a sum sufficient for her support in the event of his being cut off before he was enabled to save the required amount of money, insured his life for £2000. The annual premium payable to the Office was £45,—not a tenth of his income,—but he having unexpectedly died after two payments had been made, his widow received £2000, which enabled her to maintain a state of comfortable independence during life.

A Medical Gentleman, in a county town, whose emoluments, from a wide extended practice, averaged £300 per annum, reflecting upon the precarious tenure of health in the sphere of his duties, which necessarily exposed him to the constant changes of the weather, besides bringing him frequently into contact with parties affected with infectious diseases, took out a Policy on his own life for £1000. After being insured for four years, he died from a malignant fever caught in a professional visit, and his widow thus obtained the sum of £1000.

A still more striking instance of the uncertainty of life

occurred in the case of a commercial gentleman, who, for the benefit of his wife, to whom he had been lately married, made a proposal to an Insurance Company for a considerable sum, and, his health being good, the proposal was accepted and the premium paid ; he died of apoplexy during the first year, and the large sum insured thus fell to his widow.

We shall now consider the case of a Father, who wishes to provide for each of his children, a sum that will become due on the child attaining a certain age. This is a mode of enabling a child to get his provision free from any entanglement which may take place, in consequence of his claim being mixed up with those of brothers and sisters, all having a right to a portion of one sum payable by an Insurance Company : and, besides, by its being made payable when about to commence life in the business world, the father may enjoy the satisfaction of seeing the money expended for the benefit of his child, under his own eye. The only objection to such a plan is, that the payment to be made in effecting the Assurance is a heavier one than would be required for the same sum, payable certainly at the death of the father. There are two causes which heighten the amount of the annual payment for the benefit. The first is, that the payment of the benefit is to be made so soon ; the second, that the annual payment to the Office is to cease so soon, it being continued only while father and son are both in life, and that during the limited period only during which it is possible for the annual payment to be made. For if the payment were required longer, during such limited period, than during the period that the father and son are both in life, there might, in the event of the father's death, be no funds to continue the payment, and the annual payment must be increased by the chance of the father's death, as the Office would in that event be deprived of all further payments, and still be liable to the risk of the son's surviving to the stipulated age. This latter remark applies only of course to annual payments, for the endowment may be purchased in one sum.

We have in a preceding Chapter (Fourth) treated of the rates

chargeable by Insurance Offices for the different benefits which they give, and have there explained the cause and amount of the difference in the payments required for the above, and for a common insurance, and to that we refer for a full understanding of the case.

The following are real cases, which show the advantage of Insuring in the mode we have stated :—

A Father, in respectable but not opulent circumstances, insured £100 on the life of his son, who was 1 year old, the money to be payable on his son's attaining 14 years of age. His son attained that age, and the money was paid, which enabled the father to bind him to a respectable tradesman. He went into business for himself, and did well. The premium paid was £6 per annum, and this the father easily saved from his income. Had he laid it apart annually for that purpose, it would have only amounted to £78, and at simple interest, at the rate allowed by a bank, it would have been only £2 increased; whereas the Insurance Company paid £20 more than could have been obtained in any other mode.

Another Parent, in a higher sphere of life, secured £500 in the same manner, payable when his son, a boy of 5 years of age, attained to 18. The money was received on his son attaining that age, and was employed in fitting him out for a Government situation, obtained for him abroad, with every prospect of a successful career. Had the father not been possessed of this sum, the son could not have obtained the appointment. The annual amount of premiums paid to the office, £27, was found to be no burden, when the £500 would have been a serious call. In addition, the sum of £120, over and above the simple interest of the money paid in, was here received.

From the details given, it is plain that a person possessed of an annual income may, by means of the system of Life Assurance, place himself in the situation of a party who has already accumulated a capital, so far as that capital is

applicable, in the way of bequests, or sums to become payable to relatives and others, after the death of the possessor. An opportunity is thus afforded to every man who is possessed of such an income, to provide what he thinks fit to friends or dependants, who might otherwise be left in a situation of destitution by his decease. In spite of the obviousness of this truth, however, it is a melancholy fact that there are still many thousands, and even many ten thousands of individuals, in this enlightened and educated age and country, in situations of emolument, and with relatives to be provided for, who go on without the least suspicion that they are imprudent and improvident in spending their incomes, as if health were leased out to them; and it is only when sickness has given a warning which cannot be misunderstood, that they bitterly repent of having allowed a period of health to pass away without securing the interests of those near and dear to them, who must now remain unprovided for, and be left to struggle unaided.

It may be proper to advert to the means of the party whose life is insured turning the Policy to his own personal and immediate advantage.

This was more practicable under a system which has however ceased to be in operation for a considerable time. That system had for its principle the charging a Borrower from the office on his Policy, so far as within its surrender value, the same rate of interest that is involved in the calculation of the premiums paid to maintain the Policy. When the Northampton Table was in operation as the basis of premiums for insurance, this meant the rate of 4 per cent. per annum interest in both cases—that is, 4 per cent. was allowed in the calculation of premium, and 4 per cent. was charged on loan. The Northampton Table was latterly known to give results in premiums much above their true amount, and thus the practice was one which was considered as involving no sacrifice on the part of the office. This is changed altogether by the introduction of rates of premium based on Tables such as the

Carlisle, and more especially the Institute of Actuaries Experience, which approach the true rate of mortality much more nearly than the Northampton. Thus the premium is now generally calculated on the basis of $3\frac{1}{2}$ per cent. interest—and the rate of interest charged on the loan is 5 per cent., unless the amount of the transaction be exceptionally large. This difference of $1\frac{1}{2}$ per cent. against the Borrower on the surrender value of his Policy has a serious effect in reference to the expediency of using a Life Policy as a means of raising money on loan. Many commercial men no doubt do so—but the premium and interest thus run up to a considerable amount. It may therefore be questioned whether it is not better for the Borrower to deal with a Bank when he is desirous of having the use of money in loan.

It is quite possible, however, that loans, and to a considerable amount, may be obtained on a Policy, especially where tangible security can be given in the form of Charges on Land, or on Debentures issued by Railway Companies—and that such modes of obtaining command of capital may be expedient, and found to be advantageous to the Policy-holder and Borrower. As circumstances stand, however, we do not think it expedient to give any illustrations of that system—but will rather consider the case where a person may derive a benefit directly to himself from a Life Assurance, by making the sum assured payable to himself on attaining a certain age. This may be done independently of its being also payable in the event of his death before attaining that age. But the mode of rendering a sum payable upon a party attaining to a particular age is one that is rarely had recourse to, unless in what has been described partly under Endowments, where the benefit is to be received on attaining 21, or a lower age.

We shall therefore omit the consideration of this part of the subject, and turn attention to the case of the combined assurance of a sum payable, not only in the event of a party attaining to a particular age, but also in the event of his dying at any period, whether before or after the period when

he will have attained to the age specified. In this case the annual sum required to be paid to the Company is higher than that required for a simple Insurance of a sum payable at death—it may, generally speaking, be considered as two-thirds more. But the advantage is correspondingly greater in the earlier payment of the sum insured. And should the party insured survive to receive the sum, and require the money for his own support, he has thus saved himself from the hardship which the continued payment of the annual premium would have entailed upon him during the remainder of his life, while he actually required the funds for himself. In the event also of his having no relative in life at the time the sum becomes payable, he has the option of purchasing an Annuity upon his own life, which, at the age to which he will have attained by that time, will secure a very considerable return.

This mode of insurance cannot be too highly recommended, and public approval has been strongly stamped upon it, as is abundantly evinced by the generality of Insurance Offices now giving, in their Prospectuses, the rates at which they undertake risks of this nature, and by the fact, admitted in 1842, and much accentuated since, that this class of Insurers is greatly on the increase.

Annuities.

We shall now advert to the different ways in which the kindred system of Annuities may usefully be had recourse to.

These are employed principally by the aged, and of those the majority is composed, to a large extent, of Females.

Thus a person who has attained to an advanced age, and is possessed of a moderate amount of money, may invest the sum with an Annuity Company or Society, or Insurance Company or Society (for both of these latter also carry on this branch of business), and receive a return annually, half-yearly, or quarterly, as may be agreed on, and at a rate much exceeding what would be got by using any other mode.

The reason of this is, that the party investing the money has no right afterwards to demand back the principal sum,

which remains for ever with the Company who have agreed to pay the Annuity. And as there is a probability that the Annuitant, or party to whom the Annuity is payable, may die in a short time, before any considerable sum in the way of instalments is paid by the Company, and taking this into account, they give a greater return, in consequence, to the Annuitant.

A person who is possessed of a sum insufficient, in the return of interest which it makes, for his support, and whose age is tolerably advanced, may thus, by dealing with an Annuity Company, receive from them, in return for the money invested, a periodical sum adequate to support him during the remainder of his life.

A young person has not such an opportunity of dealing on favourable terms in an Annuity transaction, because his chance of life is so good that the Annuity Company can afford only to make a very moderate annual return. But if, in place of purchasing from them an Annuity which becomes immediately payable, he purchase an Annuity which is only to commence on his attaining a certain advanced age, he may thus derive a very considerable return in the long run, for the money he has advanced, should he survive to that period. A husband may make a provision for his wife by purchasing an Annuity, the first payment of which will be made to her at his decease, and be continued to her for the remainder of her life.

The rate of return which is received from the capital sunk in such an Annuity is also much higher than could be obtained from investing the money in the funds, or on mortgage. Those who have old and attached domestics may in this way also make them a comfortable provision in the event of their surviving, and at a very cheap rate, either by payment of a single sum, or by an annual payment, the Annuity payable by Office in both of these cases being deferred so long as both master and servant are in life ; the servant, upon the death of his master being thus, by commencement of annuity instalments, relieved from a situation, which age, infirmity, and the

difficulty of finding another situation, often cause to be attended with great hardship.

Our National Debt Office offers both Immediate and Deferred Annuities. As appears to us, unfortunately for parties desirous of availing themselves of National security in purchasing an Annuity, the purchase-prices are very high. This arises, in the Post Office Annuities, and also in the Savings Banks, which make use of the Government in their Annuity business, from the low rate of interest allowed in the calculation of the Annuity, viz., $2\frac{1}{2}$ per cent. per annum, and from the other causes, which we will state in connection with Life Annuities purchased direct from the National Debt Office. In these latter Annuities, which are sometimes for very large sums (even the Corporation of Manchester, whose business never rose to more than half of the Annuity business of the National Debt Office, having an Annuity on one life, female, which, in 1877, was worth, on valuation, above £30,000), the rate of interest fluctuates with the price of the 3 per cent. Consolidated Annuities, and has been, for two or three years, 3 per cent. per annum on the Capital invested, the 3 per cent. Consols being, during that period, and at present, above par to extent of £1 per cent. or so. But, as explained also in another portion of the work, these Annuities have been enhanced in purchase price—(1) by charge made for $\frac{1}{4}$ year's Annuity payable after death, contrary to practice prevailing up to 1884; (2) in the Male Section, by including, against the opinion of the former National Debt Actuary (so far as can be judged from his Report of 1860), and the Actuary consulted by Government, a batch of old Male lives, on which, fifty years ago, Annuities, some very large in amount, were purchased by speculators; and (3) a novel mode of calculation, which raises the purchase price. On these grounds, we hold it better for the Annuitant to secure the benefit he needs from a respectable Insurance Company, at 5 per cent. under the Government price, even taking into account the advantage of National security, which would *now* be purchased at too dear a rate.

The means of independent existence, in old age, has been offered by the French Government, in the institution, 1850, of an office, called "*Caisse des Dépôts*," appointed to receive annual contributions as low as 10 francs—8s. per annum—less than 2d. per week, on the lives of children from three years of age and upwards. The Government accumulates these payments at compound interest, at 5 per cent. per annum, with the result that, on completing sixty-five years of age, the nominee will enter into possession of a Government Annuity of £43, 11s. sterling, or about 16s. 9d. weekly.

This news would seem almost to be too good to be true—but according to the original scheme the Annuitants who, during twenty-two years up to 1872, have actually paid into the "*Caisse*," £7,923,040 sterling, will enjoy a benefit proportional to the statement made above.

It is understood that, since 1879, the rate of Interest allowed in the calculation has been reduced to 4 per cent., so as to lessen to some extent the benefit conferred previously on purchasers of Deferred Annuities.

From greater cheapness of provisions in France, the Annuity may be held to resemble a hundred year in this country. It is fair to state that the French Government receive only, on average, £4, 13s. per cent. per annum from investment in French Rentes (equivalent to our Funds), and we reckon that, in the close of the year 1900, when the instalments commence to be paid to the Annuitants, the loss to the Government will be found to exceed four and a half millions sterling.

Our Government made a similar loss, viz., about five millions sterling, by allowing higher interest to Savings Banks than the Funds yielded.

Corporations of great cities may, we hold, be able, by a judicious scheme, safely and economically to raise money for municipal purposes, through the sale of Life Annuities. For their guidance the experience of the Government during a period of 182 years is available. The competition of the Government is of course to be encountered—but as we con-

sider that the purchase-prices demanded by the latter are about 7 per cent. above what their own experience warrants, the opportunity is presented of offering to the public terms that are in accordance with the actual experience of the Government—and thus a Corporation might raise all monies required for municipal purposes at 3 per cent. per annum. It is believed that even the Corporations most in credit with the Public require to pay at least $3\frac{1}{4}$ per cent. on their temporary Debentures issued—and, supposing such a Corporation to require one million sterling, the saving annually of interest on this sum, by the Life Annuity system applied, would be £2500 per annum—making, in capital, a saving of £80,000. Thus the citizens would be saved proportionally in taxation, and if more money were required, even using the Debenture system to a certain extent, the rate of Interest on Debenture would be less than otherwise would be demanded.

In concluding this chapter, we would observe that the benefits of Life Assurance may be equally enjoyed by those whose business obliges them to go abroad and reside permanently there, as by those who remain at home. Life Insurance offices are prepared to treat even with individuals who may be about to proceed to the most unhealthy countries known, so that the benefits of Life Assurance, not confined to any particular district, may, like the light of the sun, be said to be diffused over the whole globe. As it has been generally found, on experience, that the Colonial possessions of this country possess climates, which, in many cases, are as favourable to human life as our own, if not more so, it is equally economical to use the system in the Colonies as it is to do so in our native country. A higher rate of Interest prevails in the Colonies, and thus the rates of Premium can be made lower even there than those presented by British Companies, whose average rate of Interest on Investments, taking experience of six of the largest offices during five years to 1884, on Funds above twenty millions sterling, is only £4, 7s. 7d. per cent. per annum.

As regards unhealthy countries forming part of the British Empire, India cannot be classed as such in itself, for the natives enjoy as long life as we do. It is, however, a fact that the climate is not so favourable there to Europeans, and an additional motive to making a Life Insurance is thus forced upon the consideration of those who, from their business engagements, are obliged to spend their lives, or a considerable portion of life, there, knowing as they do the increased risk at which they hold a high income. The rates at which Insurance Companies effect such Insurances are, of course, higher than those charged for individuals resident in this Country, but as the increase of the rate is proportioned exactly to the additional risk, so far as it can be ascertained, arising from the adverse health experience, and the danger incident to the voyage, it is obvious that no fault can be found with Life Assurance Companies on this account.

To enlarge further upon the benefits and importance of Life Assurance is unnecessary. Upon the lawyer, the physician, the clergyman, upon all who are connected in any degree with these professions, the certainty of the benefit and its utility press with irresistible force, and though in a less striking manner, from the temptations which his business offers to invest capital, yet with as decided advantage does Life Assurance offer itself to the merchant, and to the many classes who are mixed up more or less with his business. It is indeed the cause of the widow and the orphan, "the cause not of a particular party or faction, but the cause of every man in the nation."*

Finally, as regards the subject of this chapter, it may be remarked that what has been done during the period since the First Edition of the work was published, in advancing and more generally diffusing the system, has been a national benefit, and that the still wider adoption of Life Assurance among all classes of the community is an additional means for maintaining our place among the nations, and for securing the comfort

* Junius.

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and independence of the people, and thereby perpetuating the blessings which have long been, and, through Divine Providence, it is hoped will continue to be, associated with the British name, in all the various and extensive regions of the earth with which that name is intimately, and, we trust, indissolubly linked.

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CHAPTER SEVENTH.

PROCEDURE IN EFFECTING A LIFE ASSURANCE OR AN ANNUITY.

IF the party wishing to Insure his Life resides where the Office or its Agent have their place of business, with whom he is desirous of transacting, he will, on application, be furnished with a printed paper similar to the following:—

[If the space for answer be found insufficient in any case, please to complete the answer on the back of this Form, making a reference to the number of the question.]

PROPOSAL TO

1. Name,.....

Residence,.....

Occupation or Designation,.....

* Born at..... on.....18

*Proof of age is required by the Directors, and it is recommended that this should be furnished at once, in order that the age may be admitted on the Policy.

* Age next Birthday,.....

2. Sum to be assured,

3. Class of Assurance,
It will be assumed that the Premium is to be paid yearly, unless otherwise stated here.

4. Are you at present in perfect health?

5. Are you now of strictly sober and temperate habits?

6. Have you ever been otherwise than temperate in your habits? . .

7. Have you been vaccinated? . .

PROPOSAL—Continued.

8. State what illnesses you have had, and what medical men attended you?		
9. Have you ever been subject to Insanity, Heart Disease, Asthma, Gout, Fits, Rupture, Spitting of Blood; or have you had Varicose Veins, or any illness resulting from accident or injury?		
10. Has your life ever been proposed to this or any other Office, or have you ever been Medically examined for the purpose of Life Assurance? If so, name the Office or Offices, and state if any extra Premium was charged.		
11. Has a proposal on your life ever been declined?		
Ages if alive.	If Dead, Ages at Death and Causes of Death.	
12. Father	Father	
Mother	Mother	
Brothers	Brothers	
Sisters	Sisters	
13. Has Consumption, Disease of the Chest, Insanity, Heart Disease, or Cancer manifested itself in any member of your family or near relatives?		
14. Are the surviving members of your family in good health?		
15. Have you ever travelled or resided beyond the limits of Europe? If so, state the particulars,		
16. Have you any prospect or intention of proceeding abroad, or any business relations with a foreign country, or is your occupation likely to call you abroad?		
17. Have you ever been connected with the Army, or Navy, or Mercantile Marine?		

PROPOSAL—Continued.

18. Names and Addresses of two private friends not interested in the Assurance, to whom reference may be made by the Company as to this Proposal,	
19. Name and Address of your ordinary Medical Attendant (with whom in exceptional cases it may be necessary to communicate),	
20. If the Assurance is to be in favour of another person, state the name, profession or occupation, and residence of such person. State also the object of the assurance, . . .	

I, the person whose life is proposed for Assurance, do hereby declare that I am at present in good health, that the foregoing statements are true, and that I have not concealed or withheld any information affecting the risk of an Assurance on my life. And I, the person in whose favour the Policy is to be granted, do hereby agree that this Declaration shall be the basis of the contract between me and the and that if any material information has been withheld, or any of the statements made above have not been truly or fairly set forth, then all moneys which have been paid in consequence hereof shall be forfeited, and the Assurance itself shall be absolutely null and void.

Signed at on the 188

Signature of person whose life is proposed for Assurance,

Signature of person in whose favour the Policy is to be granted,

If the party reside at a distance from any Office or Agency, he will obtain the form by writing to the Secretary. In filling up the answers to the questions, which the Proposer must do himself, and affix his signature to the document, the point which particularly requires attention is the giving a reference to his Medical Attendant, and to his Private Friend.

In the case of having more than one Medical Attendant, the name of the one who last attended him should be given; and if he be on the whole less acquainted with the party's constitution and habits, reference should be made to both. In the event, as often happens, of the party having no Medical Attendant, the Office will be always ready to point out what they will consider equal to it. In giving the name of a private friend, care should be taken not to name a relative, but one who has been frequently, and of late in the habit of seeing him,

and therefore competent to give an opinion upon the state of his health.

The reason for being so particular is, that the party insuring is bound as much by the representation of those he refers to as by his own, unless when a contrary agreement is expressed; and as the communications made to the office by his medical attendant and his private friend are never exhibited to him, he has no opportunity of correcting any error they may commit in stating his health, habits, and other particulars. Should the statements be in gross contradiction to the facts, the Insurance may at a future period be annulled, and the benefit wholly lost, notwithstanding the party having made payments to the Office in premiums. And it is thus the interest of all who effect Insurances to be scrupulously accurate in all the information they give to the Office, and to refer to none who are not capable of giving similar information. In giving the answer as to age, it may be the case, that from the want of registration, no evidence can be furnished. Here he must be careful to state rather above than under. Reference to a Family Bible, however, or to a friend who has been long acquainted with the Proposer's family, will generally be held to furnish sufficient evidence, coupled with the party's declaration, of age.

If the party has met with any accident, even though he may consider it to have been slight, and it has left no evidence of having happened, it should still be carefully noted. It is not for the interest of an Assurance Office to attempt to resist payment on trifling grounds, and they are invariably very reluctant to do so.

In the Declaration it will be observed that the preceding parts are summed up in a general statement, so that no room is left to suppose that the party, after filling up and affixing his signature to the document, can plead ignorance of the nature of the information required.

Upon this printed form being filled up and returned, the Office will make the necessary reference, by questions similar to

those contained in the proposal; and on receiving answers, will refer the party seeking to insure to their own medical officer. This is generally considered a disagreeable step, but the notion that there is anything of this nature in the medical examination is erroneous. If the party be in apparent good health, the medical officer may be perfectly satisfied with his appearance and a few general questions, which, in such a case, will not be difficult to answer. If there be symptoms of any disease, he must, as his duty requires him, ascertain if it really exist. The medical officer, on the examination being over, gives in a report to the Directors of the Company, and at their next meeting they accept or decline the Proposal; if declined, no reasons are given, as this might involve the parties referred to; if they accept, a writing, termed a Policy of Assurance, is prepared, which, after setting forth the payment of the premium, states that the Company or Society engage to pay the sum insured, if the party die within one year; and that they bind themselves to renew it for the subsequent years, on payment at the proper time of the stated Premium. The conditions of the Insurance are usually printed on the back of the Policy, and should be carefully observed. The payment of the Premium completes the transaction, and makes the Office liable from the date of that payment.

The Stamp Duty on Life Policies is—

Not exceeding £10,	£0	0	1
Exceeding £10 and not exceeding £25,	0	0	3
If the sum assured exceed £25, and do not exceed £500—For every £50, and any fractional part of £50,	0	0	6
If it exceed £500, and do not exceed £1000—For every £100, and a tional part of £100,	0	1	0
If it exceed £1000—For every £1000, and for every fractional part of £1000,	0	10	0

The Stamp Duty is now usually paid by the Office, also Medical Fees.

If the party should have occasion to reside in a foreign climate, the rates in the General Directory we have given at the end will be no guide to the Premium he must pay to the Office.

The following is a Table acted upon by an Office transacting a large business in London and Scotland :—

Annual Rates for the Assurance of Lives in India, China, and the East generally, for £100 at Death.

Age not ex- ceed- ing	CIVIL RATES.		Age not ex- ceed- ing	MILITARY RATES.	
	Without Profits.	With Profits.		Without Profits.	With Profits.
20	£2 15 0	£3 2 0	20	£3 5 0	£3 12 0
21	2 16 0	3 3 0	21	3 6 0	3 13 0
22	2 17 0	3 4 0	22	3 7 0	3 14 0
23	2 18 0	3 5 3	23	3 8 0	3 15 3
24	2 19 0	3 6 3	24	3 9 0	3 16 3
25	3 0 0	3 7 6	25	3 10 0	3 17 6
26	3 1 6	3 9 3	26	3 11 6	3 19 3
27	3 3 0	3 10 9	27	3 13 0	4 0 9
28	3 4 6	3 12 6	28	3 14 6	4 2 6
29	3 6 0	3 14 3	29	3 16 0	4 4 3
30	3 7 6	3 16 0	30	3 17 6	4 6 0
31	3 9 0	3 17 9	31	3 19 0	4 7 9
32	3 10 6	3 19 3	32	4 0 6	4 9 3
33	3 12 0	4 1 0	33	4 2 0	4 11 0
34	3 13 6	4 2 9	34	4 3 6	4 12 9
35	3 15 0	4 4 3	35	4 5 0	4 14 3
36	3 17 0	4 6 9	36	4 7 0	4 16 9
37	3 19 0	4 9 0	37	4 9 0	4 19 0
38	4 1 0	4 11 0	38	4 11 0	5 1 0
39	4 3 0	4 13 3	39	4 13 0	5 3 3
40	4 5 0	4 15 6	40	4 15 0	5 5 6
41	4 7 0	4 18 0	41	4 17 0	5 8 0
42	4 9 0	5 0 0	42	4 19 0	5 10 0
43	4 11 0	5 2 3	43	5 1 0	5 12 3
44	4 13 0	5 4 9	44	5 3 0	5 14 9
45	4 16 0	5 8 0	45	5 6 0	5 18 0
46	4 19 0	5 11 6	46	5 9 0	6 1 6
47	5 2 0	5 14 9	47	5 12 0	6 4 9
48	5 5 0	5 18 0	48	5 15 0	6 8 0
49	5 8 0	6 1 6	49	5 18 0	6 11 6
50	5 11 0	6 5 0	50	6 1 0	6 15 0
51	5 15 0	6 9 3	51	6 5 0	6 19 3
52	5 19 0	6 14 0	52	6 9 0	7 4 0
53	6 3 0	6 18 6	53	6 13 0	7 8 6
54	6 7 0	7 3 0	54	6 17 0	7 13 0
55	6 12 0	7 8 6	55	7 2 0	7 18 6

While in Europe the Home rate will alone be payable.

WHOLE WORLD ASSURANCES FOR NAVAL SERVICE. 155

The following Table of Premiums of a London Office has a general and also a special application, viz.:—

Whole World Assurances for Captains and Officers in the Naval and Mercantile Marine Services.

Annual Premiums to secure £100 at Death.

Age next Birth-day.	Without Profits.	With Profits.	Age next Birth-day.	Without Profits.	With Profits.
21	£2 13 6	£2 19 0	36	£3 10 4	£3 18 1
22	2 14 4	3 0 0	37	3 11 11	3 19 11
23	2 15 2	3 1 0	38	3 13 7	4 1 10
24	2 16 1	3 2 0	39	3 15 4	4 3 10
25	2 17 0	3 3 1	40	3 17 3	4 5 11
26	2 17 11	3 4 2	41	3 19 3	4 8 1
27	2 18 11	3 5 3	42	4 1 4	4 10 4
28	2 19 11	3 6 5	43	4 3 7	4 12 8
29	3 1 0	3 7 7	44	4 5 11	4 15 1
30	3 2 2	3 8 10	45	4 8 5	4 17 7
31	3 3 4	3 10 2	46	4 11 0	5 0 3
32	3 4 7	3 11 7	47	4 13 9	5 3 1
33	3 5 11	3 13 1	48	4 16 8	5 6 2
34	3 7 4	3 14 8	49	4 19 9	5 9 6
35	3 8 10	3 16 4	50	5 3 0	5 13 1

Note.—These Rates of Premium are applicable to the above, trading to and from any parts of the World (excepting only the West Coast of Africa), in first class or other approved Vessels and Trades; and will be reducible to the ordinary Rates on the Assured retiring from his profession and residing permanently on shore in Europe; provided he produces a satisfactory certificate of health.

Passengers' Insurances.—Passengers' Lives and Personal Effects by Steam and Sailing Vessels insured for the Voyage.

Specimen Rates by Steam Vessels, for the Passage out.

To Australia,	from 15/- per cent. and upwards.
„ Algoa Bay,	„ 12/6 „ „
„ Cape Town,	„ 12/6 „ „
„ Ceylon and Mauritius,	„ 20/- „ „
„ China and Japan,	„ 30/- „ „
„ East India Ports,	„ 15/- „ „
„ New Zealand,	„ 20/- „ „
„ Peninsular Ports,	„ 5/- „ „
„ Ports in British North America,	„ 15/- „ „
„ Ports in Mediterranean,	„ 10/- „ „

To Port Natal,	from 15/- per cent. and upwards.
„ South America, East Coast, . . „	12/6 „ „
„ South America, West Coast, . . „	17/6 „ „
„ United States,	5/- and 7/6 „ „
„ Vancouver's Island and British Columbia, 40/-	„ „
„ West Indies,	12/6 „ „

Rates vary with the period of year, character of ship, cargo, &c.

Insurances on Passengers' Lives cover the risk of death during the voyage, whether arising from natural or accidental causes.

The Office invariably gives notice, by letter through the Post Office to the known address, when the future Premium falls due, but is not bound to do so.

The same care should be taken in preserving a Life Policy, as in keeping a mortgage or bond.

When a person effects an Insurance on the life of another, the former fills up and signs a proposal and declaration similar to the one given, but altered, of course, in form to suit the circumstances. The party effecting the Insurance here runs a greater risk, as he must take the statements of him on whose life the Insurance is made, and be bound by them in the same way as if the Insurance was upon his own life. This suggests the necessity of even greater care than in the former case.

Annuities.—In purchasing an Annuity, a form will be obtained by the party wishing to purchase, on applying at the Office he may select for dealing with. In the case of being purchased from a Corporation which formerly had the largest business in Great Britain in Life Annuities, the following is

Form of Proposal.

Name of Applicant for Annuity.

Address.

Occupation.

Amount of Capital to be invested.

Age last Birthday.

What Proof of Age can be furnished?

Amount of Annuity required.

Whether to be payable Annually, Half-yearly, or Quarterly.

Signature,

Date,

In the case of being purchased from a Company, and not from the Government, the Form will be similar to the following:—

Proposal for the Purchase of an Annuity.

1. Name and Description of the person on whose life }
the Annuity is proposed to be purchased, . }
2. Where and when born, }
3. Where and when Baptised or Registered; . . . }
and if neither, what other evidence of Age can }
be obtained, }
4. Amount of Annuity to be purchased, or principal }
Sum intended to be invested, }

Declaration.

I, do hereby declare that the above proposal contains a true statement, as far as I know or can ascertain, of the particulars thereby required to be set forth; and I do hereby agree that this Declaration shall be the basis of the contract between me and the said

.....
Dated the day of in the year of our Lord One
Thousand Eight Hundred and

If the Annuity be purchased from the Government, tables and blank forms will be furnished gratis, in the same way as in applying to a private Company. The application may be made personally, or in writing to the Secretary, National Debt Office, London, E.C.

On filling up the proposal, returning it signed, and paying the money, a writing called an Annuity Policy, will be delivered to the party purchasing, executed in the same manner as a Policy by the Directors and Secretary of the Company, or the Government Officers appointed for that purpose; and the Annuity will be payable for the first time, three, six, or twelve months from that date, according as it is due—quarterly, half-yearly, or yearly.

No medical, or other reference or examination is required in the case of purchasing Annuities, as it is obviously for the interest of the Office when the life is not a good one.

The Corporation referred to gave consideration to this latter case, but it is not known whether it does so now.

The purchase prices charged by the offices correspond pretty nearly with those which, since April 1884, have been charged by Government. In dealing with the Government, there is the advantage of avoiding the payment of Stamp Duty on the Annuity Policy, which,

When the consideration exceeds £25, and does not exceed £50, is £0 5 0

And increases for every additional £25 or part of £25 up to £300, by 0 2 6

When Consideration exceeding £300 for every £50, and for every fractional part of £50, 0 5 0

The Office will, if preferred, issue a simple agreement, and themselves pay the Stamp Duty thereon (6d.).

In dealing with Government, the Annuity, besides being payable half-yearly, has the further value of a Quarter's Annuity being payable after the decease of the annuitant.

In the case of paying Money (and not transferring Consols) a change of one-eighth per cent. is made on the Purchase Money for every £100 of 3 per cent. Stock which such Money could purchase.

The consideration chiefly requiring attention in filling up the Application for an Annuity is the age; this must be accurately given, and must not be written on an erasure.

The Life Annuities of the Government can be paid to parties not resident in London, by transmission of the Warrants by post at risk of the Annuitant.

These Warrants are on and payable by the Bank of England.

A power of attorney may be granted in favour of a party in London (for which the stamp, 10s., is payable by Annuitant), usually a banker, who, thus authorised, will draw and remit the Annuity. A Certificate of Survivance must be produced on drawing such Annuity, which is also necessary when an Office pays the Annuity.

No one can be an Annuitant under fifteen years of age, by Act regulating Government Annuities.

No one can purchase an annuity on the life of another

person from the National Debt Commissioners, unless such person shall have *bona fide, a beneficial interest in such Annuity.*

The amount of an Annuity given to a female is generally less than that given to a male, on account of the believed superior longevity of the former.

The Secretary at the National Debt Office, or any Insurance Company, will furnish the printed tables. Those of the Government vary, in the amount of Purchase-Money, with the price of Government Stock at that time, and, being tabulated accordingly, we must have recourse to an arithmetical operation to find the amount required. At present, Consols being above par ($100\frac{1}{4}$), the following are the Government Rates of Annuity which £100 sterling will purchase to continue during life:—

Age.	For a Male.	For a Female.	Age.	For a Male.	For a Female.
15	£4 10 6	£4 4 3	60	£8 19 3	£8 1 10
20	4 14 5	4 7 3	65	10 11 3	9 11 2
25	4 19 0	4 10 9	70	12 15 2	11 14 1
30	5 4 2	4 15 0	75	15 15 5	14 9 10
35	5 10 5	5 0 1	80	} 19 13 10	18 6 0
40	5 17 10	5 6 6	and		
45	6 7 2	5 14 11	up-		
50	6 19 0	6 6 1	wards.		
55	7 15 3	7 1 0			

In the case of Contingent Annuities, such as a husband purchasing an Annuity for his wife, to commence at his death, the husband must answer questions as to health, and go through the other forms as in an Assurance.

CHAPTER EIGHTH.

MISCELLANEOUS SUBJECTS ARISING OUT OF THOSE DISCUSSED
IN THE PRECEDING CHAPTERS.1. *Security first requisite for a Life Office.*

THE security for the preservation of the proper Funds of a Life Office, for their right application to the purposes of its institution, appears to rest on the following necessary conditions:—

1. That the Tables of Mortality on which the calculations of the Office are founded shall be as nearly as practicable a true representation of the vitality of the persons whose lives are to be assured, or upon whose lives Annuities are to be granted.
2. That the Securities on which the accumulating Funds of the Office are from time to time invested shall be sound.
3. That those entrusted with the direction and management of the business of the Office shall be persons of tried honesty and enlightened experience in the business.

1. As regards the first requisite, the correctness of the Table of Mortality, it is not possible, or rather, to speak definitely, it has not been found possible, up to the present time, to ascertain the duration of human life, with the mathematical precision that the calculations of the science of Astronomy have afforded to the mariner in accurately determining his longitude and latitude at sea. Two ships, sailing in opposite directions, pass each other, within view distance, say at one o'clock afternoon. The one vessel, it may be, a European, with

all the intellectual and mechanical aids on board for solving that problem—the other, a Chinese or Japanese vessel, the people in which may understand little of any European language. But on the mainmasts of each vessel is painted the result of the observations taken at noon, for the latitude, and of the observation of difference of time between the chronometers carried by each ship, and the time of the day at place of observation, for the longitude.

It is as an almost invariable sequel, that the separate observations made by people wholly ignorant of each other's existence, exactly coincide,—thus giving the assurance, each to other, of the most unexceptionable check applied to the opposite observation, and, by necessary deduction, of the safe course of navigation followed by each ship.

This is far from being the case as regards the duration of human life. The problem to be resolved in this depends upon observations not made on one day, but continued throughout all the days to which human life extends. It also embraces a considerable number of individuals, the dates of whose births must have been accurately ascertained—and also the respective dates of death. It would be the better observation to have an adequate number of infants, all born in the same year, traced to the termination of the life of each—but this has never yet been done. The nearest approach has been the enrolment, on one and the same day, of a body of Tontine Nominees, or Life Annuitants, of the age of children, and, singular to relate, this has been done at a period when only very imperfect observations existed as regards the Mean Duration, or Expectation, of life, of other bodies of men and women. While the latter have been observed only during a fixed number of years, the observation of the former has been extended to the completion of the whole course of life of every Tontine Nominee, or Life Annuitant. There is high authority in favour of the superiority, in value of such observations of Tontine and Annuitant Life, but, on the other hand, recent official authority is against the value of such observations, on the ground of their being

commenced at a period so remotely distant as the end of the seventeenth and the middle of the eighteenth centuries. Such recent official authority has preferred the observation of the lives of Annuitants who have commenced to come under observation in the beginning of the nineteenth, or present century, and who have been added to, annually, by fresh entrants, and who have, so far from completing their full course, left a fourth of their number alive at the close of the observation.

Common sense would almost be a test to apply here, with the result of showing that the official authority was in error in this. The official view has the appearance of assuming that the human race only started into existence a few hundred years ago, and that, in order to be correct, we must take its latest, though incomplete, experience to find out the truth. But Man, as an educated and refined intellectual existence, has flourished thousands of years before the official authority was born—and, in the experience of Greeks and Romans, rightly considered, we find the evidence that human life with them does not differ much from the general observations made in our own days. It is thus perfectly gratuitous, the assumption that the experience of last century, or of the century preceding, is valueless for the ascertainment of the true duration of life, even where it has been observed, under the eye of Government officials, to the full extent stated above.

The observations of the Institute of Actuaries present an average founded on the experience of a very large number of assured lives, accurately made, both as regards the ages at entry and at death. They present, however, a large proportion of the persons observed alive at the close of the observation, and in this respect are inferior in value to the Tontine and Annuitant Experience referred to in the preceding pages. They are, however, the observation of lives medically ascertained to be in good health at the commencement of the observation, whereas, in the case of the Tontine Nominees and *Life Annuitants*, no medical examination took place; still the

existence, at the close of the observation, of a considerable proportion of the persons assured, makes it inevitable that a higher vitality is exhibited than will be the result, on the inclusion of the mortality up to the death of the last of the persons assured.

It is undoubtedly from this cause, and from there being a much larger proportion of survivors at the close of observation than in the English Experience, that the American Experience presents a better vitality than the English Experience.

Thus the Premiums of Assurance are made too low to answer the actual mortality that will be experienced, if all the assured were to maintain their Life Assurance Policies to the end of the life of each and every one of them.

But that is not the case in England, and still less so in America. It may therefore be held tolerably certain that, if a less Premium be charged for Life Assurance, on the average, by offices acting on the Experience of the Institute of Actuaries of London, yet it is safe enough to do so, from the almost certain abandonment of Policies by a large number of persons, the majority of whom are in perfect health, and the Premiums received from whom were calculated on the average of the whole life, whereas, had it been foreseen and known what was to happen, these Premiums would have been calculated for fixed partial periods, and would have been necessarily lower in amount.

It would no doubt be better, in the view of accuracy on both sides, that the Premiums should be calculated from the vitality of bodies, every member of which has run his full course; but there is no means in Life Assurance of effecting this object, unless by the assured paying his whole Premiums on entry, discounted to the proper amount, then due, on that footing. An approach is made to producing a like result, by taking a period of five, or ten, or fifteen years, and fixing the Premiums accordingly, so that payment for any one of such periods shall be sufficient to exhaust the whole liability of the assured for payment of Premiums. Comparative Tables

are given, at the end of the letterpress of this Handbook, based on the whole British Government Tontine and Life Annuitant Experience up to 1825 (Females), calculated at 3 per cent. Interest, without any addition for expenses of management, which, though not on the basis of assured life, are quite sufficient to show the results of these different modes of Assurance, by comparison of the several rates of Premium.

Although not directly pertinent to the present matter, I would take the liberty to observe that, if at all practicable, it is the better plan to pay up the Premiums within a fixed period. It economises expense of management, and it gives a better basis for the operations of the Life Office as regards investments, and makes a steadier business altogether, and therefore gives a better position both to the Assured and to the Office.

2. As regards a sound basis of investment, the accumulated funds of Life Companies are generally invested on Landed Security, and, to a much smaller extent, on Government Stock. Time was when Landed Security was universally regarded as an *alter ego* of Government Security. The times are changed now, and it may as well be said at once, that a Life Office, which had its whole funds invested on the Security of land in Ireland would find itself possibly, in a very unfortunate position. No Life Office, however, will invest its whole funds in one Security. It would be as well, however, as matters stand, that the Life Offices should state not only the amount invested on Mortgage, but also *where* invested. This latter information is now important for the Public to be made acquainted with.

3. In reference to Auditors.—Those charged with the investigation of the Accounts of an Office, should, with advantage, be changed after the lapse of a certain period. There is no doubt that this is not generally done; but deserves remark. In the first place, it is an advantage that the Auditor should be an independent Accountant; but it is a further advantage,

to have this party exchanged for another, after a fixed period has elapsed.

As regards the Actuary of the Office, the most important functionary of all, he should not be removable at the fiat of any Board of Directors, but only by the Company or Society itself, convened on due notice given.

The Directors appear to be a very responsible body, but, though extremely useful in the performance of the duties for which they are appointed, it is not possible for them to make a thorough supervision in the continued hebdomadal visits they make to the scene of operations.

To test the state of the Company, it would be well to have occasional investigations, ordered, not at stated but at entirely unexpected periods, and thus an Office would be kept, like a Military Post, always on the alert.

As regards the Staff, too much importance should not be attached to the capability of placing two or three letters of the alphabet after a name. The practice is, however, becoming more general to hold, as in the military line, no one qualified, unless experienced and trained under the new modes introduced within the last thirty or forty years.

It was undoubtedly a just remark of Napoleon, that the safety of France, threatened at the birth of freedom, in the great Revolution of 1789, by a coalition of the despotic powers of the Continent and, to be regretted, this country, was owing, not to the popular enthusiasm, and the hundreds of thousands who volunteered to stand in their country's defence, but to the *regular Army of France*, existing for at least two centuries before the Revolution. That body received and disciplined the popular levies, and without the discipline so imparted, these popular levies would have been scattered, opposed to the well-trained armies of Europe, like chaff before the wind. But, on the other hand, the amount of talent developed in the military line by a whole nation called to arms, immeasurably surpassed all precedent, and made France in self-defence more than a match for Europe.

Therefore, it should never be forgotten that the ability and talent necessary to conduct with success the affairs of a Life Office, is by no means confined to those who are connected with the able Scientific Societies which have sprung up within the last thirty or forty years.

2. *Interpretation given by Legal Decisions to Question of meaning that attaches to the words "Being of temperate habits."*

"Should the statements" (made by the party on whose life the assurance is to be made, his private friend, and medical attendant) "be in gross contradiction to the facts" (relating to health, habits, and other particulars) "the Insurance may at a future period be annulled" (page 152 preceding, and also on page 100, of first edition, 1842).

The above derives peculiar importance from the results of the Weems and Lotinga cases, the former connected with the Standard, the latter with the Commercial Union (the latter office not in existence in 1842), decided recently.

In the Weems case, the Lord Ordinary (Fraser), Judge in the first instance, decided against the Company, and this decision was affirmed on Reclaiming Note to the Second Division of the Court of Session in Scotland, one of the Judges however dissenting. This decision was, on appeal to the House of Lords, unanimously reversed, and the Policy annulled.

In the Lotinga case, the Jury, on the first trial, which lasted several days, not being able to agree, were discharged. In the second trial a verdict was given in favour of the Plaintiff (in Scotland, Pursuer), Executor of the deceased, and the Policy was sustained as valid.

These cases, it must be allowed, were singular, and, in important respects, unfortunate. Four Judges as against one decided, in Scotland, that the Weems Policy was valid. Four Judges in England (one of them, however, a Scottish lawyer), decided that the Policy was invalid. Such uncertainty is perilous to the interests of all Companies,

and suggests the extreme impolicy of raising questions in doubtful cases. The second case enforces this by a decision against the Company, thereby affecting, it may be materially, its future prosperity.

Looking to the particular circumstances of the Weems case, and without the slightest intention of questioning the great legal acumen and practical talent of the five Judges who were against the validity of the Policy, and whose opinion prevailed, it may be pointed out that it seems to be universally admitted that there was no *mala fides* on the part of the deceased, which was practically acknowledged by the Company not taking their costs, amounting to £1500, although judgment was given in their favour for these.

Again, it was in evidence that the man, who was charged as being of intemperate habits, actually worked at his business, the drawing of plans for the branch of industry in which his firm was engaged, for twelve hours daily. It might fairly be said this man was of intemperate habits, but not in the sense used by the Company which sought to annul the Policy it had issued.

Although it may be just in the abstract, no Insurance Company has sought to limit the number of hours a man may devote daily to his business, and any excess beyond the usual extent in this cannot be pleaded as a ground for annulling a Policy. But the Assured in this case was a *Provost* (Latin, *Prepositus*; French, *Prévôt*; English, *Mayor*) or Chief Magistrate of a Scottish Burgh, or Municipality, of some importance, and thus necessarily, from the nature of the office itself, and possibly from the usage of the community over which he presided, of convivial habits. Placed between Scylla and Charybdis, he was unable to maintain the *juste milieu*, giving, on the one hand, a more moderate attention to his private business, and on the other assuming a restricted habitude, in public and private attendances, on convivial occasions, where the presence of the Chief Magistrate is sought. We have in our eye, at this moment, a very worthy gentlemen who was

some years ago Chief Magistrate of a large city, and who when celebrating, as President of a Commercial Society, the Annual Exhibition of Schools under their control, was visibly observed, *even by the scholars*, to have had "*too much*." It is hoped that excellent citizen will not, by too much devotion to his own business, bring on his relatives a case similar to that of poor Weems, but it is just possible, though not probable, that such another instance should present itself.

The Lotinga case is a warning to Companies against raising questions on the subject.

So far as a conclusion can be drawn, it points to the Companies universally making a distinction that the Money in the Policy shall not be paid, as with the French Offices, unless the deceased survive for two years, after which the Policy is to be absolutely unchallengeable, or, what is the more likely course, to declare that the Policy shall be unchallengeable from the first, unless fraud be proved, and that restricted to the period of five years from its date.

Although adverse conclusions may be drawn against both the offices represented in the above, and I can recollect the deceased manager of the older office regarding with no favour the action of an English office, the Unity, now extinct, which had disputed a Policy,—yet, on a just appreciation, *no blame can be attributed to either office*. It might have been better for the interests of both not to have raised the question, but the public derives the benefit in the long run. It is thus seen, from actual cases, that there is a screw loose in the machinery of the construction of a Policy, and it thus becomes equally the interest and the duty of all the offices to lay their heads together, and discover and apply an effectual remedy, which there is little doubt will be found.

3. *On the Periodical Valuations made by Life Offices preliminary to their Declaration of Division of Profits.*

There is no doubt that the nearer the basis of Valuation, or the Table of Mortality selected, which constitutes such basis,

is to the truth, the more just will be the distribution of Profits among the assured.

When a man enters into the contract of Life Assurance, he does so, if entering the scheme which secures for him a share in the division of profits, on the footing that such division shall be fair and equal. In order that it may be fair and equal, it is essential that the true Rate of Mortality that obtains among the people of the country of which he, the Assured, is a citizen, should regulate the calculations. It is usual to apply the same table to the ascertainment and division of Profits as has been adopted for the calculation of the Premiums of Assurance, from which and their improvement at interest, such Profits are to arise. If Tables of Premiums could be calculated from a true Table of Mortality at such a rate of Interest as would enable these Premiums, with an addition exactly meeting expense of management, to balance the outlay caused by the Assured dying off at the same rate as indicated by this true Table of Mortality, the perfection of Life Assurance would be attained; *for there would be no profits to divide*, yet every claim would be met as it emerged.

To this happy goal the Life Assurance Companies should be continually tending, by the Tables of Mortality which they from time to time adopt, although that goal may never actually be reached.

Some may be disposed to think that, in the course of time, it might be the wiser plan for each office to adopt its own Experience, thereby giving effect to whatever may be peculiar in the position of the members who form its assured body. We do not think this, however, is likely to be generally adopted, though there is a great deal to be said in its favour in particular circumstances. Say that a body of learned men, such as the Professors in Universities, and the clergymen of a Church, unite in forming a scheme for the provision of their widows and of their families. If the scheme has been carried on for a long period—say a century, and it be desired to utilise the experience thus acquired, and what may be regarded as a

sufficient number of lives have been subjected to observation, it seems not out of the way to adopt such Experience for a future tract of time, in reference to the Premium to be paid by the members, and the Benefits to be periodically declared in favour of those for whom the surplus funds are destined.

It may be said that this involves considerable expense, every Society thus forming its separate Table of Mortality, and that the differences are not so great among such Societies as to justify the additional expense that would thus be incurred.

It is impossible, however, to prevent Societies dealing with the division of their Surplus Funds as they please, there being no law to hinder them from doing so.

In the United States of America, where the business of Life Assurance is conducted on a more extensive scale than exists in any other country, including our own, the tendency latterly has been in favour of dropping the American Experience (mostly that of one great office, the Mutual of New York, started in 1843), and to adopt as the Table for use that of the Institute of Actuaries.

As time rolls on, it may be, that the American Experience, having grown up to proportions greatly exceeding those of the basis of the Institute's Experience, the American Institute may calculate Tables on the experience so grown up, and a new American Experience may be adopted for regulating both Premiums and Profits within the wide extent of the United States. It is not likely, however, that any Experience will be adopted here, excepting what is derived from the Rate of Mortality prevailing among the Assured in British offices. There is a homogeneity among the populations of the British Isles which suggests the propriety of adhering to the experience which the Assured there furnish. In any future Tables it seems desirable to have perfect observations, meaning thereby, observation continued to the close of all the lives observed. This would exclude from observation all the members who surrender or abandon their Policies of Assurance; all, in fact, who do not complete their contract by continuing the same to the end

of life, and including only those who continue the Assurance up to the period of their death.

Tables calculated from such data would no doubt present higher rates of Premium than those that might be calculated from the Experience of the whole body who enter a Life Assurance Office, but they would be true to nature, and true to the contract, which is one for the whole period of life, generally speaking.

Tables, on a separate basis of Mortality, might be calculated for short periods, during which the Rate of Mortality would be lighter than that presented by Tables deduced from the experience of the whole of life.

4. *Considerations on the Revival of Lapsed Life Assurance Policies.*

In the American offices, under whose Reports to the Superintendent alone are to be found returns bearing on this subject, the practice, as regards relative amount revived, in comparison of amount of new Policies issued annually, varies considerably, *ex. gr.*, in 1884 that proportion in the business of the Mutual of New York was 6 per cent., in that of the New York Life only $\frac{1}{3}$ per cent., and in that of the Equitable, U.S., 4 per cent.

One office in this country, making return of answer to questions for General Directory in this book, states that in its practice no Life Policy is ever forfeited. We have not the means of stating on what conditions Policies are revived by that office. But the following appears to us to be what, in the circumstances, would be fair and reasonable as between the Assured and the Office.

The Office naturally would require that the Premiums past due, with interest, should be paid up. But here a question occurs. These Premiums being paid up in the lump, with expenses of management, is it fair that these expenses should be, as in the Premiums payable annually? Clearly not; for it may be twenty years' Premium being received in one sum, while the trouble taken by the Office is for one year instead of twenty.

Thus expense of management should practically be deducted from Premium.

A certificate of good health must be insisted on, otherwise all in bad health might seek to revive their Policies.

As regards rates of interest on which to charge accumulation, if without profits, the rate of interest involved in the calculation of the Premium seems not inequitable. It may be urged that the office would have made a higher rate by receiving the Annual Premiums and investing them in loans. But these loans are subject to risk, while the payment of bygone Premiums to the office on lapsed Policies is an absolute certainty, and there is no expense of management attaching to that money.

As regards Policies with profits, how can the office give profits if it do not receive the Net Premiums, with additions for profits, and accumulate at rate of interest it realises on average? But does not the same consideration apply in reference to the Net Premium and the percentage addition for profits, that there is no trouble comparatively, and no expenses in recovering them in the lump after many years, and no *risk* in *loans* or trouble in collecting interest has been incurred?

There is no question the addition for expense of management should be struck off.

As to the additions for profits, it might be difficult to fix any proportion to be taken off. Allowing them, we think it may be conceded to accumulate only at the rate of interest on which the Premiums are calculated.

There can be no doubt it is for the interest of a Life Office to afford every facility for the revival of its Policies. To act otherwise is against the root principle of Life Assurance, and would bring down an office to the level of an unscrupulous usurer, ready when occasion offered to foreclose the mortgage he holds upon his unhappy victim. Many are the victims of innocent misfortune, from the casualties of business, the failure of others, including banks and men to whom money has been entrusted, and a Life Office should be far above taking advantage of these accidents.

There is the last consideration, by far the most important, that during the twenty years for which the Policy supposed has been suspended, the Office has had no risk upon the life. How then, it may be asked, is the Office entitled to exact the Premiums? It may be answered, that the Office is only in the end requiring the party assured to implement the contract which his misfortune, although innocent, prevented him from fulfilling. This is undoubtedly true, and the Assured obtains the benefit of continuing his payments at the much lower scale in operation when he entered upon the Policy.

Still the fact remains that the Office receives Premiums for a period during which it ran no risk. The equitable mode of adjustment may arise from the consideration that, had the assured party known that, at the end of a certain period, he would become unable to continue his payment of Premiums, he would have insured only for the period during which he had been able to maintain his Policy. This would point to the Office reducing the Premium, during the period of suspension of payment, by the amount of the Annual Premium that would secure the amount assured, in the event of the death occurring within that period. By such a modification the Assured would not be called upon to pay for the time during which he had no benefit from the Policy; and, on the other hand, the Office receiving the difference between the ordinary Premiums for the whole of life, and the short period Premiums for the years of suspension, would receive the ordinary Premium from time of revival for the remainder of life.

When a Loan has been Effected on the Policy.—This subject was very fully considered by the author in a memoir published in Appendix to Tenth Annual Report by the Superintendent of the Insurance Department, State of New York, Part II., Life and Casualty Insurance, 1869; and the conclusion arrived at, after a full and fair consideration, was, that the borrower on his Policy should pay no higher rate of Interest for the loan than is involved in the Life Premiums payable by him to the Office.

The following is an excerpt from that memoir :—

“The contract of assurance—on the one side, to pay during life certain sums periodically; on the other side, to pay after death of payer, to his executor or administrator, a stated sum—would have appeared to a Roman, to Cæsar, a most unprofitable bargain for the payer for life; in short, something similar to what he relates of the Gauls, who were accustomed to lend money *to be repaid to them in the next world*. As providing for children, however, the system gives a security beyond that possessed by a Roman, at least under the emperors, where a man had often to compound to secure effect to his testament by making the emperor heir to half his fortune.

“But say that it is desired by the payer for life to use his payments, to a limited extent, during his own life, what would we think of a bank which received the money of a depositor at 5 per cent. interest, and when he wanted a part of it back, charged him 10 per cent. on the advance? But this is practically what is done in a transaction between an insured party and the Company lending thereon. The Company allow interest by their Premium Tables at say 3 per cent., and charge 5 against the insured on what he borrows.

“What is the consequence of such a transaction, at compound interest, say continued for 40 years? We take a long period, as fully showing the effect of the system. The insured pays in £100 annually during 40 years, which would at the end of that period accumulate, at 3 per cent. compound interest, to £6916. Of course, the insured cannot get that amount, the Company having run the risk of his death, which must be paid for. But our comparison will show that even the £6916 would be swept away if he borrowed from the Company to a limited extent. Say that the Assured borrowed £65 annually on his Policy during 40 years; this, accumulated at 5 per cent. compound interest, amounts to £7001 at end of 40 years, and sweeps away the accumulated sum. The result is, that the Assured has not only got quit of the surplus of £35 per annum, which has been converted into the property of the Company, but is indebted to the Company in the sum of £85.

On what principle of justice or equity is this result arrived at? The Company, no doubt, ran the risk of his life, but for that they have been paid at the rate fixed by the Table prepared and issued by themselves. If they have not got enough for that, it is their own fault. But how, in the name of fairness, are they entitled to lend the Assured his own money at a higher rate of interest than they have allowed him in their calculations? It is the most objectionable of proceedings to trade upon a man's capital and charge him 2 per cent. for the use of it. Such a proceeding would not be tolerated in any branch of business that is understood, but it is done barefacedly in Assurance business.

"Of course, the Company would maintain that the Assured had no right to borrow even the value of the Policy; that the Company could have lent to another at 5 per cent., and that therefore the Assured must pay that rate if he become a borrower.

"This seems altogether false reasoning. A man must always have right to what is his own; the Company can never lose by lending to him within limits of value of his Policy, and command therefore the best possible security, which is not the case in lending to others. Something may be charged for trouble, but nothing assuredly in the shape of interest beyond what is allowed in the Company's Premium Tables."

5. *Chronological Table of Life Assurance Companies in existence in March 1842 and continuing to September 1886.*

When Instituted.	Name of Company.	Amount of Life Assurance Funds.	Amount of Life Annuity Funds.	Amount of Life Assurance and Life Annuity Funds undistinguished.	Date of Close of Account.
1720	Royal Exchange. . . .	£1,964,516	£32,948	...	1882 April 30
1721	London Assurance, . . .	...	...	£1,772,906	1881 Dec. 31
1762	Equitable (Mutual), . . .	4,168,155	...	...	" " "
1797	Pelican,	1,100,232	4,648	...	" " "
1806	London Life (Mutual), . . .	3,679,263	...	...	1882 June 30
"	Provident,	2,156,237	...	...	1881 Dec. 31
"	Rock,	2,064,351	...	...	" " "

When Instituted.	Name of Company.	Amount of Life Assurance Funds.	Amount of Life Annuity Funds.	Amount of Life Assurance and Life Annuity Funds undistinguished.	Date of Close of Account.
1807	Eagle,	£2,853,071	£43,673	...	1881 Dec. 31
"	West of England, . . .	964,838	7,951	...	" " "
1808	Atlas,	1,502,804	...	...	" " "
"	Norwich Union (Mutual), .	1,671,053	...	...	" " "
"	Amicable (1706), . . .	222,199	...	...	1882 April 5
1810	Sun,	1,711,996	...	...	" June 24
1813	Union,	980,352	...	...	" " 30
1815	Scottish Widows' Fund (Mutual), . . . . .	...	...	£7,667,448	1881 Dec. 31
1819	Imperial, . . . . .	...	...	951,779	" Oct. "
1821	Guardian,	1,390,926	4,587	...	" Dec. "
"	National of Ireland, . .	142,034	120,357	...	" " "
1823	North British and Mercantile,	3,112,590	395,515	...	" " "
"	Law Life,	4,387,027	...	...	" " "
"	Economic (Mutual), . .	3,522,469	...	...	" " "
"	Edinburgh, . . . . .	...	...	1,706,850	1882 Mar. 31
1824	Alliance,	1,191,153	...	...	1881 Dec. "
"	Clerical, Medical, and General Patriotic of Ireland, . .	100,462	...	2,391,034	1882 June 30
"	Scottish Union and National	...	...	...	1881 July 31
"	United Kent, Limited, . .	...	...	2,241,277	" Dec. "
"	Yorkshire, . . . . .	...	...	351,287	1882 Mar. 25
"	Crown, . . . . .	...	...	1540,468	" Feb. 28
1825	Scottish Provincial, . .	1,153,323	38,238	1,350,947	" Mar. 25
"	Standard, . . . . .	...	...	...	" Jan. 31
"	University,	989,384	...	5,531,457	1881 Nov. 16
1826	Scottish Amicable (Mutual),	...	...	...	1882 May 1
1829	Clergy Mutual, . . . . .	...	...	2,306,721	1881 Dec. 31
1830	National (Mutual), . . .	...	...	2,877,192	1882 May 31
1831	Scottish Equitable (Mutual),	2,544,899	...	797,171	1881 Dec. 31
1832	Friends Provident (Mutual),	...	...	...	1882 Mar. 31
1833	Caledonian, . . . . .	...	...	1,581,888	1881 Nov. 30
1834	Mutual,	1,056,599	...	690,558	" Dec. 31
"	Universal,	1,012,709	...	...	" " "
1835	National Provident (Mutual)	...	...	...	" Nov. 30
"	Metropolitan (Mutual), .	1,672,412	...	3,871,190	" Dec. 31
1836	Hand-in-Hand (Mutual), .	...	...	...	" " "
"	Legal and General, . . .	1,834,212	...	2,000,161	" " "
"	Liverpool and London and Globe,	2,782,254	520,528	...	" " "
"	Northern,	1,532,748	65,707	...	" " "
"	Westminster and General, .	...	...	430,912	" " "
1837	General, . . . . .	...	...	687,440	" " "
"	Scottish Provident (Mutual),	...	...	4,109,586	" " "
1838	British Empire Mutual, .	...	...	842,522	" " "
"	City of Glasgow, . . . .	...	...	1,099,399	1882 Jan. 30
"	Life Association of Scotland,	...	...	2,432,943	" April 5
1839	English and Scottish Law, .	1,064,427	48,221	...	1881 Dec. 31
1840	Church of England, . . .	...	...	655,563	" " "
"	Farmers and General, . .	116,148	759	...	" " "
"	Provident Clerks (Mutual),	...	...	1,033,146	" " "
"	Reliance (Mutual), . . .	...	...	536,409	" " "
"	United Kingdom Temperance (Mutual), . . . .	...	...	3,020,942	" " "
1841	Wesleyan and General, . .	75,439	9,543	...	" " "

The preceding Table suggests very obvious remarks :—

The period embraced is 1720–1842, 123 years.

The years during which no Life Offices that exist in 1842 were founded, are :—

	Periods in Years.		Periods in Years.
1722–1761,	40	1816–1818,	3
1763–1796,	34	1820,	1
1798–1805,	8	1822,	1
1809,	1	1827–1828,	2
1811–1812,	2		<hr/>
1814,	1		93

The periods during which activity prevailed in founding Life Offices established up to 1842, which have lasted until 1886, are :—

1720–1721,	2 years,	2 offices founded,	followed by 40 barren years,	1722–1761
1762,	1 "	1 "	" 34 "	1763–1796.
1797,	1 "	1 "	" 8 "	1798–1805.
1806–1808,	3 "	7 "	" 1 "	1809.
1810,	1 "	1 "	" 2 "	1811–1812.
1813,	1 "	1 "	" 1 "	1814.
1815,	1 "	1 "	" 3 "	1816–1818.
1819,	1 "	1 "	" 1 "	1820.
1821,	1 "	2 "	" 1 "	1822.
1823–1825,	3 "	14 "	of which 4 in 1823, 6 in 1824, and 4 in 1825.	
1826,	1 "	1 "	followed by 2 barren years, 1827–1828.	
1829,	1 "	1 "		
1830–1841,	12 "	25 "		

To obtain an index to a large cause of actual results, we need only refer to the leading historical events of the different periods.

As regards barren years.

The five years preceding, viz., 1715–1719, had an effect in rendering the forty years following 1721 barren. The events comprehended the death of Queen Anne in August 1714, followed by a disputed succession, and the attempt made in Scotland, under the leadership of the Earl of Mar, formerly Secretary of State to Queen Anne, who is said to have been herself in the plot, during the last years of her reign, to restore the male branch of the Stuart family to the throne.

This attempt failed, but left uncertainty in the public mind, the new family from Hanover being unpopular. The members of the House of Commons voting themselves four years longer continuance of power, under what is called the Septennial Act, in 1716, is a striking proof of the political uncertainty of the times.

The establishment of the Royal Exchange and the London Assurance Corporations in 1720, 1721, respectively, appears to have been a result of the public mind being given to speculation, which set up the South Sea Company in the former year. The long interval of forty years, 1722–1761, during which no office was founded that has survived to this day, is not so easily accounted for. One may almost suspect the cause to be a law enacted in favour of the two existing offices, prohibiting the establishment of new Companies. But the Equitable alone being founded in 1762, the cessation of any permanent Life Offices being instituted is continued up to 1796, and there being only one originated in the year 1797, the period of non-production of Life Offices may be fairly held to extend from 1722 to 1802, a period of eighty-one years.

The political events of the period, though important, such as the renewal in 1745, in Scotland, of the attempt to restore the Stuarts, the war with Spain in 1739, and with France in 1743, continued to 1748, when the Peace of Aix-la-Chapelle was concluded—the renewal of the war in 1755, extended to Spain in 1763, and terminating in that year by the Treaty of Paris, and the unfortunate war with our American colonies, commenced 1775, and terminated by the Treaty of Versailles, 1783, fill up in all about forty-five years of the eighty-one years. These leave thirty-six years,—one half before 1739, and the other half after 1783,—during which, except the breaking out, in the latter period, of the great war with France, nothing occurred of any particular importance. This war was the effect of the execution of the French king, January 21, 1793, followed immediately thereafter by the order of the British Government to the French Ambassador to leave Britain,

permission to land being refused to another French Ambassador sent in his place, and Declaration of War by France thereupon, February 1, 1793. The result, after a contest of twenty-two years, during the course of which it would be difficult to say which country was most to blame, is a debt of above seven hundred millions sterling continuing to this day, with a prospect of paying off about two hundred millions in a quarter of a century from this date.

It is almost needless to say that it is beyond the bounds of all probability that such a war should be declared again. If it were, it could not be continued against the wishes of the people of this country.

As regards the causes of the halt of nearly a century in the progress of improvement, viewed in connection with the system of Life Assurance, we must see, in the establishment of the Bank of England in 1693, and of the Bank of Scotland in 1696, followed by the Banks of many private firms in London soon after, with the Royal Bank of Scotland in 1711 and British Linen Company, also in Scotland, in 1746, proofs that there was no want of enterprise as regards that branch of commerce in the United Kingdom. Ignorance must be held to be the cause, in the main, why so little was done in Life Assurance during this long period from 1693 to 1803, 111 years, which include only four Life Assurance Companies existing at this day.

That ignorance was well illustrated by the hesitation of the Government in granting a Charter to the Equitable Society—the Crown lawyers being at first against such Charter being granted, on the ground of the great risk of loss to which it might, in all likelihood, as appeared to them, subject the parties who provided the guarantee that was required in the early years of the Society, which, as stated in the first edition of this Handbook, did little business until after 1787. The labours of Dr Price have been referred to there, as the cause of the latter great success of that Society.

But it is evident, from the statement in the work of the

Government Life Annuity Commutation Tables (vol. iv., General Preface, page xlii.), that speculators had seen the advantage of nominating for the Great English Tontine of 1789, male lives, selected on account of their prejudged (by the Contributors) superior vitality. Thus it is proved that there was possessed, even then, by a section of the public, the knowledge of the fact that selection made a considerable difference, as regards future extent of life, if carefully made—and it could be inferred that the Equitable Society, acting through its Board, would be as careful as the contributors in 1789 of the Government Tontine had been. Thus the knowledge of the subject was advancing among the public in geometrical progression, and the known great success of the Equitable Society after the dawn of prosperity in 1787, during the following period up to 1806, was the moving cause of the establishment of eight new Life Offices in that year and on to 1810. This was followed up, on the practical closing of the doors of the Equitable to new members in 1816 (by the Society limiting the Profits to the first 5000 Members on their Books), from 1819 to 1826, a period of eight years, by the establishment of eighteen new offices, the whole continuing to the present time.

The mercantile failures of the well-known year of public misfortune, 1826, caused almost a paralysis of all further movement until seven years after, viz., 1833; when it recommenced in earnest and continued up to 1840,—other eight years,—resulting in twenty-one new Life Offices being instituted.

In speaking of these, the circumstance of an established Office for Insurance against the risk of Fire, taking up Life risks, is treated as a new Life Office, which it is in reality, the probabilities being of an entirely different description from the Fire risks.

This brings our general review down almost to the epoch of the publication of the first edition of the *Handbook for Life Assurers*, viz., March 1842, and closes the first branch of the general review.

It has been the fixed purpose of the author of this Work to maintain throughout the strictest impartiality in treating of the subject of which he has resumed the consideration, after the lapse of nearly half a century. But, while strictly impartial, he expects to be found fearlessly just, in stating his conclusions with respect to whatever subject of reflection may be presented in the course of his observations.

One remarkable fact is presented by the statement of progress before made, and it is this—

During the period from 1720 to 1805, eighty-six years, and with the addition of nine further years (qualified by the competition of nine Life Offices instituted during the latter period), that is to say, for ninety-five years up to 1814, four Life Offices have, with above limitation, had entire possession of the field, and their accumulated funds, as at 1881, April 30, amount to £7,232,903,

But one office, commencing in 1815, has, during sixty-six years, up to 1881, December 31, accumulated Life Assurance Funds to the amount of £7,667,443, being 6 per cent. above the united accumulation of the four offices. Reckoning number and time, the latter office has made 415 per cent. more in amount of progress than any one of the four preceding offices, on the average. This is a remarkable fact. Of course there are qualifying circumstances, such as the immense increase in Population and Wealth of this country since the period when these four offices were in sole possession of the field. There is also the fact that two of them cultivated other branches of business than Life Assurance, so as, to a certain extent, to divert their attention from the latter. There is also the fact that one of the four offices, possessing 58 per cent. of the whole accumulated Life Annuity Funds of the four, has followed the Northampton Table of Mortality throughout. The successful office has adopted, successively, the Northampton, the Carlisle, and latterly the Healthy Males of the Tables of the Institute of Actuaries.

If any judgment can be fairly formed on the subject, it may

be held that the latter and more successful office, viewed in the light of public encouragement, has been ready to take advantage, for the purposes of its business, of the later investigations regarding the rate of Mortality prevailing among those insured under Life Policies.

As regards Commission paid to Agents bringing business to an office, apart from the ordinary Agents of that office, it is no doubt the fact that such Commission is not paid by the principal office among the six, and that it is paid by the office by far the most successful in obtaining public favour. This latter office also advertises, and the other does not.

It appears a reasonable thing to follow the course of improvement which additional knowledge procured by fair investigation and research has obtained, and that an office which will not adopt the improvement offered by the result of such fair investigation, has itself only to blame if its Income fall off. As regards Commission and Advertising, it would be better if these could be saved, but in the absence of these, many might not insure at all.

What would be thought of a Christian Missionary who, assuming that the Christian Religion was, *per se*, so excellent that it would commend itself to the acceptance of all mankind without any effort being made to lay its advantages before, and enforce its claims upon the attention of, mankind, would make no exertion for that purpose? The precept is "Go into the highways and hedges, and compel them to come in, that my house may be filled;" and the same principle appears applicable to the benefits which the Life Assurance system confers.

Of course there is a limit, and if the practice of paying Commission on business brought to the Office, and of Advertising, is extended beyond that limit, so as to fritter away the profits in the attempt to procure business, it is to be condemned.

• An office which maintains a considerable staff for the conducting of its business, and which does not make much progress in increasing that business, suffers the disadvantage

of a long period of maintenance of its establishment, without receiving the ease which a considerable increase to its business would afford in the matter of expenses of management. And although that office may neither pay Commission nor Advertise, yet there may be no real saving resulting from the seemingly economic course followed. Indeed, the process may prove the reverse of economic.

Taking an extended view of the subject of Life Assurance and its interests, it will be found that the real and substantial improvements that have, during the period of half a century up to the present time, been introduced, owe their origin, not to the offices that have acted on the principle of paying no Commission and of abstention from Advertising, but, on the contrary, to offices who have both paid Commission and Advertised largely and successfully. Their improvements have thus been made public property, and every office has been afforded the opportunity of making use of them, if they chose. But in the column of ratio of expenses of management to income of office, no credit is given for the general benefit derived from these improvements, so far as the office is concerned to which the improvements are owing. Yet it must be allowed that, in a fair and general view, such improvements ought to be reckoned in favour of the office, equally with the effect on expenses of management, of the Commission, and Advertising given by the office.

Pursuing the view of the progress of Life Assurance, we take now the offices that started between 1806 and 1814, being ten in number, and their accumulated funds at 31st December, 1881 (with two of them, however, continued to June, 1882), amounting to £17,857,787.

We now take another office, which has justly been cited as one of the foremost in the introduction of improvements, and find its accumulated funds, as at 1881, November 16, to amount to £5,531,457. Proportioning for number and time, the average accumulation of each of the ten offices is £1,408,502, and the other office has increased its funds by 292 per cent. compared to the average office.

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Taking, finally, the offices that have been instituted between 1815 and 1830 (omitting the two offices already brought into comparison), we have nineteen offices, all now existing, and their accumulated funds as at 1881, December 31 (nine only, however, terminating their accounts of that date, the others, two earlier in 1881, and eight in 1882), amount to £32,012,791.

Following out the line of comparison already made, we take an office which commenced some years after 1830, and which has the merit, in its way of suggested improvement, of adopting, somewhat after the fashion of the Equitable, the principle of minimising the loss that arises from those of the Assured who die earlier than the time reckoned, on the average, by the Table on which the Office bases its calculations. This Office's accumulated funds, as at 1881, December 31, amount to £4,109,536. Proportioning number and time, the average accumulation of each of the nineteen offices amounts to £1,278,188, and the particular office referred to has increased its funds by 221 per cent. compared to the average office.

One general conclusion may be drawn from the three comparisons, made as above, of progress in accumulation of funds during periods comprehended within 123 years between 1720 and 1842, and that is, that in the succeeding period of 123, or, say 100 years, no such comparison will be possible, because the future progress will approach much more nearly to an equality among the offices. Mankind are too keenly alive to their own particular interests, and are, in the mass, too intelligent in regard to the subject involved, to allow, it may be, three or four offices to obtain a great preponderance over the rest, by either offering any considerable advance in advantages, or by conducting their business in a more energetic and abler mode.

It is not here, in this country, that any comparisons on a great scale, and showing marked individual progress, can thus be made in the future; but in the United States of America this is possible, and is actually proceeding at the present time. It ought never to be forgotten, in reference to the

older offices, that they have weathered storms to which the younger members of their community have never been exposed, and although they may have been distanced in the race by the competitors who have started long after them, yet, were we to take the accumulated amount of the benefits they have conferred during the long course of their existence, the merits of their younger competitors would by no means bulk so largely.

It is therefore very reasonable and proper, in setting forth the advantages offered by an office, to make reference to the amounts they have been enabled to distribute during their past career.

From the preceding List, embracing fifty-nine offices established up to 1842, and still in existence, it is evident that the years 1821-1826 were the most prolific of Life Assurance Companies, no less than seventeen owing their origin to that period, and the next period in importance is 1832-1837, during which thirteen offices were established, these two periods accounting for more than the half of all the existing offices founded up to 1842.

If we take the view of

Amount of Accumulated Funds—

Then 1821-1826 gives £32,918,106,

And 1832-1837 gives £23,798,854.

But the latter require eleven years more to be placed in an equal position, as regards period during which funds have accumulated, and it is very evident that the latter have accumulated more rapidly, considering effect of this, than the former.

Among the former, what may be termed the leading Companies, are the

North British and Mercantile,
Law Life,
Economic (Mutual), and
Standard.

Among the latter, the
 National Provident (Mutual),
 Liverpool and London and Globe,
 and
 Scottish Provident (Mutual),
 four of the whole being Mixed Proprietary, and three
 Mutual.

There is no doubt that Capital has a tendency, especially during the youth of an office, to attract Capital, but we see that, while three out of four of the less successful offices are Mixed Proprietary, two out of the three of the more successful division are Mutual.

There can be little hesitation in pronouncing that the Mutual form is the more successful in accumulation of funds.

On the whole, we are much disposed to think that the powers of the Mutual are more effectual for accumulating Capital than the Mixed Proprietary.

The great success of the Mutual System encourages confidence and support. But the great success of private Proprietary Companies induces the Public to think that they, the Public, ought rather to have the advantage than a body of Proprietors.

If the Government were to bring in a Compulsory Life Assurance Bill and carry it, the effect of such a measure would be injurious to both classes.

There seems, however, very little probability of such a system ever being sanctioned; indeed, the only practical plan of carrying it out would be to incorporate the system with the Poor Rates, which would both extend its benefits and promote the making the system universal.

The Nation would be the Insurer, and, accumulating the Premiums at the highest rate of the Funds, would thus distribute the same in the most beneficial manner practicable.

The effect of an undertaking by Government to act in this way would tend much to weaken all Companies in that line.

As regards the justice of such a provision, there cannot, I think, be much doubt.

The Nation would thus give its assurance that the Provision necessary in old age would be secured to every man.

There might be a question of the Amount to be so secured, but this difficulty would no doubt be overcome.

If we look generally to the means by which this country has attained, so to express it, the rank of the greatest potentiality that exists, we shall see the way in which Life Companies and Societies are most likely to be eminently successful.

Prudence, energy, combined with knowledge, and the strictest regard to justice and honour, coupled with liberality, appear thus to constitute the chief requisites for success.

It is melancholy to read the account given by Mr Francis Baily, in Appendix to his Book on Life Annuities and Assurances, 1813, of the way in which Barrett's labours were treated both by the Royal Society and the then existing Life Offices. It may possibly be found, on rigid investigation, that the bulk of the offices of the present day are still far behind in recognition of the labours of the Actuary for their benefit.

For Barrett's invention of the computation of Life Annuities by the Commutation Form, the Royal Society found no place in their published Transactions.

For encouragement to print his Work of Life Annuity Tables, at various rates of interest, extending to the equal of two quarto vols. of 1400 pages, there responded to the application, out of fifteen existing offices, *only two*,—about 13 per cent. of the then existing offices. Without for one moment claiming the position of Barrett as an inventor, the author may refer to the patronage extended to his larger Work of the Government Life Annuity and Commutation Tables, in eight volumes and parts, extending to 2000 pages—of which above 60 per cent. are quarto. The total number of offices in Great Britain and Ireland practically transacting Life Assurance business appears to be, from the Board of Trade Returns for

year 1886, 83, of which 35 have subscribed for copies, making 42 per cent. of the whole.

This rise from 13 per cent. to 42 per cent. is, however, the effect of the increased enlightenment on the subject produced by seventy-three years, or nearly three quarters of a century of time. One might think this, after all, was not very rapid progress.

With these observations we close this branch of the subject.

Application of Accumulated Funds.

Having shown how money can be accumulated by Life Assurance Companies, it seems a natural transition to inquire how the money accumulated has been applied—in that matter embracing the whole accumulation from the commencement, without any deduction for the outgoings.

One great artery is the payment of the promised benefits to the parties contemplated in the Contracts between the Companies and the Assured.

This divides, as regards the Recipients—into two branches:—

1. Those who receive the sums assured with added profits.
2. Those who receive only the sums assured.

The latter branch is comparatively small.

Another outlet for the Accumulated Funds is, in the case of Mutual Societies, the Reserve made before dividing Profits; in the case of mixed Proprietary Companies, the Dividends paid to the Shareholders.

To go into the subject, unless in a general way, is entirely beyond the scope of this Handbook.

At same time, accurate information is desirable, and what has really occurred with one Company having an experience of between forty and fifty years is the following:—

The total amount contributed by the Shareholders was £10,000.

That sum was nearly all lost, at an early period, in bad loans.

The Company's Stock is now, according to the market price, such as to represent a Capital of £250,000 in value. Holding

that 4 per cent. per annum upon this nearly represents what it is held by the public that the Stock will yield annually, then it follows that this Company has not only recovered its lost Capital, but can afford to pay the Holders of its Stock an Annual Dividend equal to its paid-up Capital, that is 100 per cent. per annum dividend on its Capital.

It is by no means to be assumed that this is an average case, and there are good reasons for believing that it is exceeded, in one instance at least, in the proportion of four to one.

On the other hand, it is always to be borne in mind that some Companies have come to grief, involving their Shareholders in enormous losses, while Companies, to the number of hundreds, have started, held on for a short period, and then have been obliged to wind up, with the loss of almost all the Capital contributed.

The better knowledge possessed by the general public makes it not improbable that a National system of Life Assurance may be established, which will enable every man to insure to any amount he sees fit, with National Security, but as to making the system, to any amount of Insurance, however limited, compulsory, the greatest doubt may be entertained. A Parliamentary Committee has been sitting on the subject, and its report is unfavourable. It is said by the advocates of Compulsion, that it is a mere substitute for Poor Rates, and that once an universal system of payments were established to form a fund for the natives of this country in old age, Poor Rates are in the process of gradual extinction, which would be arrived at when the system attained maturity.

It is mentioned in the Annual Report, 1885, of the Superintendent, Insurance Department, State of New York, that the German Empire has adopted a system of Compulsory Insurance for its working classes, which took effect December 1884 (page x. of part II., Life and Casualty Insurance Companies).

There is no doubt a temptation for any Government to do something to advance the fulfilment of so desirable an end, but unless the money to pay the Annual Premium can be

190 NATIONAL INSURANCE WITH PROVISION FOR THE POOR.

obtained by some other mode than raising it directly from the parties interested, it does not appear likely to obtain any favourable hearing from Parliament.

Two years ago a Tax of upwards of 5 millions sterling to endure for $23\frac{1}{2}$ years, was quietly placed upon the shoulders of the Nation by the popular minister of the day, without almost a word of opposition or remonstrance, unless from one of the Members for Glasgow. This is for the purpose of paying off 170 millions of National Debt. Suppose the Poor Rates of the United Kingdom to amount to 10 millions sterling per annum, representing a Capital of 330 millions sterling (at 3 per cent. interest), it is clear such a Tax, accumulated for $23\frac{1}{2}$ years, would relieve the Nation from all future provision for the Poor.

It appears even more reasonable and appropriate, such an application, seeing that the Reformation deprived the Poor of their patrimony, and made necessary the Statute of Elizabeth to replace the loss. Rightly understood, there is no man entitled to the designation of pauper. What he gets, in the shape of relief, is simply what, before the Reformation, he had a legal right to—one-third of the property of the Church being the patrimony of the Poor—before, *for them*, that disastrous event.

As regards the obligation of the public to pay the National Debt, and maintain the annual Interest—that is not disputed. The obligation, put side by side with that towards the Poor, does not appear to be of a more binding character. The war in which the debt was incurred is far more recent, but the difference of two centuries has little effect on a National obligation such as provision for the Poor.

6. *Tables, in abbreviated form, founded on the British Government Experience up to 1825. Female Life, 3 per cent. per annum Interest.*

1. A COMMON ASSURANCE PURCHASED BY AN ANNUAL PREMIUM.
(Page 65 preceding.)

Age.	Premium for £100 due at Death.	Age.	Premium for £100 due at Death.
1	£1 3 0	40	£2 8 6
5	1 2 0	45	2 17 0
10	1 3 10	50	3 7 2
15	1 7 1	55	4 2 4
20	1 9 10	60	5 3 0
25	1 13 4	65	6 11 10
30	1 17 4	70	8 12 4
35	2 2 1	75	11 8 2

2. A COMMON ASSURANCE PURCHASED BY A SINGLE PAYMENT.
(Page 69 preceding.)

Age.	Single Payment for £100 at Death.	Age.	Single Payment for £100 at Death.
1	£28 6 10	40	£45 8 5
5	27 8 11	45	49 8 7
10	28 19 6	50	53 11 0
15	31 14 5	55	58 11 5
20	33 17 1	60	63 17 4
25	36 7 4	65	69 7 1
30	39 1 3	70	74 14 10
35	41 19 0	75	79 13 3

3. AN ASSURANCE FOR A SHORT PERIOD.

Equated Premium for £100 at Death, if within One Year.
(Page 71 preceding.)

Age.	Premium.	Age.	Premium.
2	£1 11 6	40	£1 3 4
5	0 19 0	45	1 4 0
10	0 8 4	50	1 7 8
15	0 14 5	55	1 16 6
20	0 16 7	60	2 3 10
25	0 17 10	65	3 4 11
30	1 0 0	70	4 18 7
35	0 18 1	75	7 6 6

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*Non-Equated Premium for £100 at Death, if within One Year.
(Pages 71, 72 preceding.)*

Age	Premium.	Age.	Premium.
2	£1 14 2	40	£1 5 3
5	0 17 9	45	1 5 0
10	0 8 0	50	1 7 4
15	0 14 8	55	1 18 4
20	0 16 4	60	2 2 10
25	0 18 0	65	3 3 4
30	0 19 7	70	4 17 2
35	0 17 4	75	7 6 9

*Annual Premium for £100 at Death, if within Five Years.
(Pages 71, 72 preceding.)*

Age.	Premium.	Age.	Premium.
2	£1 5 6	40	£1 2 7
5	0 14 6	45	1 8 6
10	0 9 11	50	1 9 6
15	0 16 0	55	1 18 5
20	0 16 4	60	2 12 1
25	0 18 3	65	3 15 7
30	1 0 7	70	5 14 1
35	1 1 0	75	8 9 4

4. AN ASSURANCE PURCHASED BY A DEFINITE NUMBER OF PAYMENTS.

*Ten Years (Annual) Premium for £100 at Death.
(Page 73 preceding.)*

Age.	Premium.	Age.	Premium.
2	£3 7 8	40	£5 8 10
5	3 4 5	45	5 19 7
10	3 7 6	50	6 10 5
15	3 14 9	55	7 5 6
20	4 0 0	60	8 3 8
25	4 6 3	65	9 7 6
30	4 13 0	70	11 0 0
35	5 0 0	75	13 5 7

TABLES—GOVERNMENT, FEMALE, 3 PER CENT. 193

5. ENDOWMENTS.

Annual Premium for £100, due on completing Age 21. (Pages 73-75 preceding.)

Age.	Premium.	Age.	Premium.
1	£3 6 3	9	£6 9 11
2	3 11 3	10	7 4 5
3	3 16 11	11	8 1 10
4	4 3 2	12	9 3 3
5	4 10 2	13	10 10 1
6	4 18 2	14	12 4 10
7	5 7 3	15	14 11 2
8	5 17 8	16	17 16 3

6. ASSURANCE OF £100 PAYABLE AT DEATH, OR ON COMPLETING AGE 60. (Pages 76-78 preceding.)

Age.	Premium.	Age.	Premium.
1	£1 6 11	30	£2 15 9
5	1 6 7	35	3 8 3
10	1 9 6	40	4 7 9
15	1 14 7	45	6 0 10
20	1 19 9	50	9 5 2
25	2 6 7	55	19 2 3

7. ASSURANCE BY INCREASING (at 20 per cent.) RATES OF PREMIUM. (Pages 79-83 preceding.)

Ages.	Premium First Five Years.	Premium Second Five Years.	Premium Third Five Years.	Premium for Remainder of Life.
15	£0 19 6	£1 3 5	£1 7 4	£1 11 2
18	1 0 9	1 4 11	1 9 1	1 13 2
21	1 2 1	1 6 5	1 10 10	1 15 3
24	1 3 8	1 8 4	1 13 1	1 17 10
27	1 5 4	1 10 5	1 15 6	2 0 7
30	1 7 4	1 12 10	1 18 3	2 3 9
33	1 9 4	1 15 2	2 1 1	2 6 11
36	1 12 1	1 18 6	2 5 0	2 11 5
39	1 15 0	2 2 0	2 9 1	2 16 1
42	1 18 6	2 6 2	2 13 11	3 1 7
45	2 3 0	2 11 8	3 0 3	3 8 10
48	2 8 0	2 17 8	3 7 3	3 16 10
51	2 13 11	3 4 8	3 15 5	4 6 2
54	3 1 10	3 14 2	4 6 6	4 18 11
57	3 11 0	4 5 2	4 19 5	5 13 6
60	4 3 1	4 19 8	5 16 3	6 12 11

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8. ASSURANCE BY DECREASING (at 20 per cent.) RATES OF PREMIUMS (Pages as above.)

Ages.	Premium First Five Years.	Premium Second Five Years.	Premium Third Five Years.	Premium Remaining L.
15	£2 4 3	£1 15 5	£1 6 7	£0 1
18	2 6 9	1 17 4	1 8 0	0 1
21	2 9 2	1 19 4	1 9 6	0 1
24	2 12 2	2 1 9	1 11 4	1
27	2 15 3	2 4 3	1 13 2	1
30	2 18 11	2 7 1	1 15 4	1
33	3 2 3	2 9 9	1 17 4	1
36	3 7 0	2 13 7	2 0 2	1
39	3 11 9	2 17 5	2 3 0	1
42	3 17 1	3 1 8	2 6 3	1 1
45	4 4 1	3 7 4	2 10 6	2 1
48	4 11 4	3 13 1	2 14 10	1 1
51	4 19 2	3 19 4	2 19 6	1 1
54	5 9 9	4 7 10	3 5 10	2
57	6 1 1	4 16 10	3 12 8	2
60	6 15 5	5 8 4	4 1 3	2 1

ASSURANCE ON JOINT LIVES.

No examples of the Values under this head having been given in preceding pages, it is unnecessary to furnish any of the same.

The general principle, that an Assurance is similar to an Annuity, but with the positions of the Receiver and of the Annuity reversed, has been referred to in these pages.

In illustration, let us take the case of a Female aged 45, with an Annual Premium for £100 due at death, . . . £1
Present Value of £100 due at death, . . . 39
Annuity to be given for £100, . . . 5

From the proportions of the last two sums, it follows that £39, 1s. 3d. would purchase an Annuity of . . . 1

which, in popular language, might be held the equivalent, or Premium, for £100 due at death.

But the exact Premium is, as above, . . . 1
or 1s. 11d. less.

TABLES—GOVERNMENT, FEMALE, 3 PER CENT. 195

This arises from the Annuity payments being made at the *end* of each year, whereas the Assurance Premiums are paid at the *commencement* of each year. To convert the one into the other, therefore, we only require to deduct $\frac{1}{20}$ th of the Annuity. In the present case that results in the exact Premium being found.

If Age 20 were taken, the result is slightly varied, a deduction of $\frac{1}{20}$ th giving 2d. less than the correct Premium, which is £1, 9s. 10d.

If Age 40 were taken, the result is also varied, a deduction of $\frac{1}{20}$ th giving 2d. more than the correct Premium, which is £2, 8s. 6d.

Within such narrow limits do the results thus vary.

9. AN ASSURANCE PURCHASED BY A DEFINITE NUMBER OF PAYMENTS.
3 years' (Annual) Premiums for £100 at Death.

Age.	Premiums.	Age.	Premiums.
2	£9 17 3	40	£15 15 9
5	9 10 2	45	17 3 9
10	9 19 9	50	18 12 7
15	10 19 5	55	20 9 10
20	11 14 4	60	22 8 9
25	12 12 0	65	24 12 2
30	13 11 0	70	26 19 10
35	14 10 8	75	29 10 4

10. 5 years' (Annual) Premiums for £100 at Death.

Age.	Premiums.	Age.	Premiums.
2	£6 3 5	40	£9 17 1
5	5 18 4	45	10 15 3
10	6 3 11	50	11 13 4
15	6 16 7	55	12 18 0
20	7 5 11	60	14 4 1
25	7 17 1	65	15 15 0
30	8 9 2	70	17 12 1
35	9 1 5	75	19 16 5

196 TABLES—GOVERNMENT, FEMALE, 3 PER CENT.

11. 15 years' (Annual) Premiums for £100 at Death.

Age.	Premiums.	Age.	Premiums.
2	£2 9 1	40	£4 0 2
5	2 6 8	45	4 8 6
10	2 9 1	50	4 17 3
15	2 14 5	55	5 10 2
20	2 18 4	60	6 7 0
25	3 3 0	65	7 10 10
30	3 8 1	70	9 5 9
35	3 13 4	75	11 15 0

12. ANNUITIES.

Value of Annuity of £10 per Annum on a Single Life.			Annuity for £100 of Purchase Price.	
Age.	Males.	Females.	Males.	Females.
40	£165 12 0	£177 8 0	£6 0 9	£5 12 9
41	163 5 0	175 2 0	6 2 6	5 14 3
42	160 10 0	172 10 0	6 4 7	5 15 11
43	157 14 0	169 12 0	6 6 9	5 17 11
44	154 17 0	166 14 0	6 9 2	6 0 0
45	151 16 0	163 13 0	6 11 9	6 2 3
46	148 7 0	160 15 0	6 14 9	6 4 5
47	144 13 0	157 16 0	6 18 3	6 6 9
48	140 18 0	155 0 0	7 1 11	6 9 0
49	137 2 0	152 7 0	7 5 10	6 11 3
50	133 14 0	149 10 0	7 9 7	6 13 10
51	130 6 0	146 3 0	7 13 6	6 16 10
52	126 19 0	142 9 0	7 17 6	7 0 5
53	123 17 0	139 1 0	8 1 5	7 3 10
54	120 16 0	135 13 0	8 5 6	7 7 5
55	117 9 0	132 5 0	8 10 4	7 11 3
56	114 0 0	128 19 0	8 15 5	7 15 1
57	110 12 0	125 7 0	9 0 10	7 19 6
58	107 0 0	121 16 0	9 6 10	8 4 3
59	103 7 0	118 3 0	9 13 6	8 9 3
60	99 16 0	114 1 0	10 0 5	8 15 4
61	96 10 0	110 3 0	10 7 3	9 1 7
62	93 5 0	106 11 0	10 14 5	9 7 9
63	89 16 0	102 12 0	11 2 8	9 14 11
64	86 15 0	98 17 0	11 10 6	10 2 3
65	83 4 0	95 4 0	12 0 5	10 10 1
66	79 9 0	91 8 0	12 11 8	10 18 10
67	76 4 0	87 11 0	13 2 6	11 8 5
68	72 15 0	83 15 0	13 14 10	11 18 11
69	69 19 0	80 3 0	14 5 11	12 9 6

GENERAL DIRECTORY
OF
LIFE ASSURANCE OFFICES
IN
GREAT BRITAIN.

I. MIXED OFFICES.

PARTICULARS OF INFORMATION.	Alliance.*	Atlas.*
1. When Instituted,	1824.	1808.
2. Fire, Life, Accident, Guarantee, or Marine, ..	Life and Fire.	Fire, Life, Accident.
3. Capital Subscribed,	£5,000,000.	£1,200,000.
4. Amount of Capital paid-up and invested, ..	£550,000.	£144,000.
5. Amount of Life and Annuity Funds, as in Board of Trade Returns, published 1883, ..	£1,191,154.	£1,502,806.
6. Date to which Account brought down, ..	31st December 1881.	25th December 1881.
7. Amount of Funds as at latest date, ..	£1,314,700.	£1,476,524.
8. Amount of other liabilities,	125,406.	122,648.
9. Amount of Fire Funds,	557,091.	105,000.
10. Date to which latest Amount brought down, ..	31st December 1884.	25th December 1884.
11. Date of last Division of Profits,	31st December 1883.	25th December 1884.
12. Next Division of Profits takes place on ..	31st December 1888.	25th December 1889.
13. Period of Division once in every	Five years.	Five years.
15. Number of Payments entitling to Profits, ..	Five.	Participates at next Valuation.
16. Proportion of Profits given to the Assured, ..	Four-fifths.	Whole, less small commission for management.
17. Profits applied by way of	Reduction of Premiums or Bonus.	Bonus, Reduction of Premiums for Life, or 5 years, or Cash.
18. Last Dividend to Shareholders, rate p. ct., ..	About 15½ per cent.	16 per cent.
19. Days of Grace,	30.	30.
20. Time allowed thereafter if fine paid,	12 calendar months.	Surrender Value applicable to revival.
21. Fine p. cent. for such on Sum Assured, with also certificate of good health, ..	Only Interest at 5 per cent. on Premium.	Only 5 per cent. on Premium in arrear.
22. Conditions on which Policies not included in above are revived, ..	Sur. Val. appl. to keep up Policy if made when in force.	See No. 20.
23. When is Policy indisputable?		
24. What, besides non-payment, voids Policy? ..	Death within 3 years, if by suicide, or justice, except where held by third party. After 3 years Policy valid in all cases. Immediately.	Death in 5 years, if by suicide, or justice, except <i>qua</i> interest of third party. After 5 years valid in all cases. Immediately.
25. Claim paid after Death and Title proved, ..		
26. Invested on Mortgage,	£173,570.	£741,170.
27. Invested in Government Stock,	233,548.	93,772.
28. Invested in Loans on Rates, and on Lands and Houses and Ground Rents, ..	1,527,179.	847,551.
29. Proportion of Funds invested otherwise, ..	612,900.	165,677.
30. Limits of Voyage and Residence allowed without Licence from the Society, ..	After 3 years and limits not transgressed, Unlimited Free Residence.	For those who do not intend to reside out of Europe, 10s. per cent. Single extra Premium covers Residence anywhere.
31. Table on which Valuations made and rate of interest per cent.,	For Assurances, Inst. of Act., H.M. (5) & H.M., 3 p. ct. int. For Annts., &c. Carlisle, 3 p. ct.	Northampton, for those insured on that Rate. For others, special Table. 3 per cent.
32. Head Office in	London.	London.
33. Chairman,	Rt. Hon. Ld. Rothschild	Sir W. J. W. Baynes, Bt.
34. Principal Officer,	Robert Lewis.	Life Dep., Geo. King.

* For further information as to Offices marked *, see Appendix.

Note.—Detailed list of Abbreviations at end.

I. MIXED OFFICES.

sh Equitable.*	Caledonian.*	Church of England.*	City of Glasgow.
1854. Life. £250,000. 731. £758,279. January 1882. 231. 351. January 1885. January 1885. January 1888. Three years. One. Mutual Depart- ment, less expenses Rdtn. of Prems., tern. of period, Policy of equal payable. 3d. p.ct., average 5 years. 15.	Fire, 1805; Life, 1833. Fire and Life. £400,000. £90,000. £690,558. 31st December 1881. £773,842. 42,827. 251,114. 31st December 1885. 31st December 1885. 31st December 1892. Seven years. Five—but Intermediate Bonus, 1 p. ct. Five-sixths. Bonus, or to make Policy payable in Lifetime. About 35½ p. ct. on average. Calendar month. 12 calendar months. 2½ per cent. per month on Premium. Surren. Value, applic. under Non-Forfeiture system. 5 yrs. (if age admitted), unless fraud. Suicide in 6 months from Policy's date, on own life. None otherwise. Three months. Earlier on 8 p. ct. p. an. disc. £453,888.	1840. Life and Fire. £1,000,000. £40,000. £665,564. 31st December 1881. £691,269. 14,703. 39,481. 31st December 1884. 31st December 1882. 31st December 1887. Five years. Five. Whole profits of Mutual Branch. Bonus, Reduction of Premium, makg. pay- able in life, or cash. 12 per cent. 30. Twelve months. Fraud only. Three months. £325,959.	1838. Life. £600,000. £60,000. £1,099,400. 20th January 1882. £1,809,163. 34,525. 20th January 1885. 20th January 1884. 20th January 1889. Five years. Participation from date of issue, vesting aft. 5 years. Above nine-tenths. Bonus, Cash, or Reduc- tion of Premium for 5 years, or for life. 14 per cent. 21. Three months. 5 per cent. on Prem. Paid-up Pol. after 3 pay- ments for all exc. 7 p. ct. of whole business. After 5 years, age hav- ing been admitted. See No. 23. Immediately. £898,564. 10,125. 315,819. 179,180. Free Residence any- where, if Assured during 1st 5 yrs. have not passed limits. Carlisle, 3½ per cent. For Survivorships, 3 per cent. Glasgow. William Paterson. Fred. F. Elderton.
269. Nil.	Nil.	Nil.	Nil.
162. 82.	344,875. 359,020. Where no prospect of going to unhealthy climate, Policy unre- stricted. After 5 years, limits not ex- ceeded, Free. Act. H.M. 3 per cent.	303,217. 156,277.	315,819. 179,180. Free Residence any- where, if Assured during 1st 5 yrs. have not passed limits.
Life Table, No. p. ct. interest.	Edinburgh. Hon. E. C. B. Elphinstone D. Deuchar.	Special Table, experce. of Assured Lives, and Government Tontine Nominees and An- nuityants, 4 per cent. London. William Emmens. H. M. Baker.	Carlisle, 3½ per cent. For Survivorships, 3 per cent.
London. J. Hartley. S. S. Gover.			Glasgow. William Paterson. Fred. F. Elderton.

* For further information as to Offices marked *, see Appendix.

Note.—Detailed list of Abbreviations at end.

GENERAL DIRECTORY OF LIFE ASSURANCE OFFICES.

I. MIXED OFFICES.

PARTICULARS OF INFORMATION.	Clerical, Medical, and General.	Commercial Union.
1. When Instituted,	1824.	1861.
2. Fire, Life, Accident, Guarantee, or Marine,	Life.	Life, Fire, and Marine.
3. Capital Subscribed,	£500,000.	£2,250,000.
4. Amount of Capital paid-up and invested,	£50,000.	£250,000.
5. Amount of Life and Annuity Funds, as in Board of Trade Returns, published 1883,	£2,391,034.	£738,028.
6. Date to which Account brought down,	30th June 1882.	31st December 1881.
7. Amount of Funds as at latest date,	£2,634,593.	£867,643.
8. Amount of other liabilities,	88,208.	431,445.
9. Amount of Fire Funds,		548,238.
14. Amount of Marine Funds,		221,067.
10. Date to which latest Amount brought down,	30th June 1885.	31st December 1881.
11. Date of last Division of Profits,	30th June 1886.	31st December 1882.
12. Next Division of Profits takes place on	30th June 1891.	31st December 1887.
13. Period of Division once in every	Five years.	Five years.
15. Number of Payments entitling to Profits,	One.	Three.
16. Proportion of Profits given to the Assured,	Five-sixths of Profits on all Policies.	Four-fifths.
17. Profits applied by way of	Bonus, Cash, or Reduction of Premium for 5 years, or for life.	Bonus, Cash, or Reduction of Premium for life.
18. Last Dividend to Shareholders, rate p. ct.,	28 per cent.	15 per cent.
19. Days of Grace,	30.	30.
20. Time allowed thereafter if fine paid,	Three months.	See 21, 22.
21. Fine p. cent. for such on Sum Assured, with also certificate of good health,	2s. per cent. per month.	1s. 6d., 1 mo.; 2s. 6d., 2 mo., pd. in days of gr.
22. Conditions on which Policies not included in above are revived,	Revivable within 12 months at 1s. per cent. per month fine without certificate.	In 13 months, at 5 p. c. on Prem., and 2s. 6d. fine on Sum Assured.
23. When is Policy indisputable?		
24. What, besides non-payment, voids Policy?		Failure to pay Interest on Loan.
25. Claim paid after Death and Title proved,	On Board's approval.	1 month after Board approve.
26. Invested on Mortgage,	£563,969 includes loans on Life interests.	£706,793.
27. Invested in Government Stock,	182,701.	146,463.
28. Invested in Loans on Rates, and on Lands and Houses and Ground Rents,	604,910.	262,238.
29. Proportion of Funds invested otherwise,	1,421,221.	1,202,889.
30. Limits of Voyage and Residence allowed without Licence from the Society,	All removed, if Board satisfied limits wont be exceeded, save for Naval, &c., persons.	After 5 years all removed if 30 attained, and limits for 5 years not exceeded; save Naval, &c., persons.
31. Table on which Valuations made and rate of interest per cent.,	Act. H.M. 3 per cent.	Inst. of Act. H.M. 3½ per cent. For Annuities, Carlisle, 3½ per cent.
32. Head Office in	London.	London.
33. Chairman,	Sir J. R. Mowbray, Bt.	Andrew R. Seoble.
34. Principal Officer,	Benjamin Newbatt.	T. E. Young, Actuary.

GENERAL DIRECTORY OF LIFE ASSURANCE OFFICES.
I. MIXED OFFICES.

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Crown.	Eagle.*	Edinburgh.*	English and Scottish Law.
1825. Life. £308,000. 657.	1807. Life. £1,678,675. £167,867.	1823. Life. £500,000. £75,000, and 23,450 Reserve.	1839. Life. £1,000,000. £70,000, and 7,138 Reserve.
£1,350,968. arch 1882. 247. 388.	£2,896,745. 31st December 1881. £2,806,077. 113,515.	£1,706,850. 31st March 1882. £1,962,130. 63,171.	£1,112,649. 25th December 1881. £1,266,179. 30,831.
arch 1885. arch 1886. arch 1890. ive years. Three.	31st December 1884. 30th June 1882. 30th June 1887. Five years. Five, but proportionate addition for 1 or more years to de cease. Four-fifths.	31st March 1885. 31st March 1885. 31st March 1892. Seven years. Five.	25th December 1884. 25th December 1885. 25th December 1890. Five years. Five.
ive-sixths.	Cash or Bonus.	Nine-tenths from all sources. Bonus, Reduction of Premium, and Cash.	Nine-tenths of Life Ass. business profits. Bonus, Cash, Reduction of Premium during next 5 years, or life.
Reduction, or reduction of Prem. making payable red age. it 9½ per cent.	About 10½ per cent.	12 per cent.	About 9½ per cent.
30. 13 months. s. per cent.	Calendar month. Three months. 10s. per cent.	30. Addl. time on appl. bfre- hd., & payg. sm. charge. 2s. p. ct. 1st month, and 1s. p. ct. others up to 6. Free Paid-up Policy equivalent to Sur- render Value obtain- able while Policy in force. After 5 yrs., and proof of age (fraud exceptd).	30. 12 months, and pay- ment of moder. fine.
ally so; no dis- d Policy. of holder by de or justice. ctors have power ake Allowances, pt <i>felo de se</i> . months.	If Assured die within one year from date of Policy. On life of another, no exemp- tion. 3 mos. after dec., proof being given of death. £2,331,709.	Immediately. £793,625.	Free Paid-up Policies granted in lieu of Ordinary, &c., Poli- cies on conditions. After 5 years, fraud excepted. £442,193.
8.	8.	8.	8.
Nil.	Nil.	Nil.	Nil.
8. 8. ditions removed board satisfied s wont be passed.	91,749. 664,001. Europe, Australia, New Zealand, and any other country (except Cali- fornia), N. of 33° N. L., or S. of 33° S. L., or to reside, except seamen. Carlisle, 4 per cent.	768,401. 561,725. After 5 years all re- striction removed if no extra Premium in- curred during same.	18,217. 913,738. After 5 years all re- striction removed (except Central and W. Coast of Africa) if no extra Foreign risk incur. during same.
f Act. H.M., for rs. Govt. 1875 Anns. 3½ p. ct. assured, 4 p. ct. levers, &c. London. Spencer Perceval. A. Mackay.	London. Sir Geo. Russell, Bart. George Humphreys.	Inst. of Acts. H.M. and H.M. (5). Anns. by Govt. 1875 Tab. 8½ p. c. Edinburgh. No permant. chairman. George Macritchie Low.	Inst. of Act. H.M. 3½ per cent. Annuities, Govt. Table, at 3 per cent. London. J. R. Bulwer. F. E. Coleman, Actuary.

* For further information as to Offices marked *, see Appendix.

I. MIXED OFFICES.

PARTICULARS OF INFORMATION.	Equity and Law.*	General.*
1. When instituted,	1844.	1837.
2. Fire, Life, Accident, Guarantee, or Marine, ..	Life.	Life and Fire.
3. Capital Subscribed,	£1,000,000.	£1,000,000.
4. Amount of Capital paid-up and invested, ..	£60,000.	£50,000.
5. Amount of Life and Annuity Funds, as in Board of Trade Returns, published 1883, ..	£1,664,603.	£687,440.
6. Date to which Account brought down, ..	31st December 1881.	31st December 1881.
7. Amount of Funds as at latest date, ..	£2,002,652.	£795,937.
8. Amount of other liabilities,	23,668.	47,561.
9. Amount of Fire Funds,		35,247.
10. Date to which latest Amount brought down, ..	31st December 1884.	31st December 1884.
11. Date of last Division of Profits,	31st December 1884.	31st December 1882.
12. Next Division of Profits takes place on ..	31st December 1889.	31st December 1887.
13. Period of Division once in every	Five years.	Five years.
15. Number of Payments entitling to Profits, ..	Two.	1 to 5, according to time to Division.
16. Proportion of Profits given to the Assured, ..	Nine-tenths of total profit divided.	Four-fifths.
17. Profits applied by way of	Bonus, Cash, or Reduction of Premium for 5 yrs., or for life.	Bonus, Reduction of Premium for 5 years, or Cash.
18. Last Dividend to Shareholders, rate p. ct., ..	17½ per cent.	10 per cent.
19. Days of Grace,	One calendar month.	30.
20. Time allowed thereafter if fine paid,	Three months.	Twelve months.
21. Fine p. cent. for such on sum Assured, with also certificate of good health, ..	1s. per cent., certificate not stipulated for.	2s.
22. Conditions on which Policies not included in above are revived, ..	Directors' practice is to revive at any time on terms they think just.	
23. When is Policy indisputable?	Immediately, except transgression of limit, or fraud.	After 5 years Policies indisputable, if age admitted. Fraud.
24. What, besides non-payment, voids Policy? ..		
25. Claim paid after Death and Title proved, ..	A week.	Immediately.
26. Invested on Mortgage,	£1,086,106.	£241,163.
27. Invested in Government Stock,	104,619.	264.
28. Invested in Loans on Rates, and on Lands and Houses and Ground Rents,	18,000.	354,562.
29. Proportion of Funds invested otherwise, ..	877,595.	332,756.
30. Limits of Voyage and Residence allowed without Licence from the Society,	All restriction removed if Board satisfied Assured not likely to go to any part below 30° from Equator.	Europe, U.S.A., Canada, Australia, N. Zealand, Tasmania, and the Cape. Reduced extra Premium for India, China, &c.
31. Table on which Valuations made and rate of interest per cent.,	Pols. of 5 yrs. & under, H.M. For others H.M. (5). For Anns. Office Tables in use. 3 p. c.	For eq. Rates & Endow., H.M. Forrest, Carlisle. 4 p. c. for Pol. partic. & Ann. 3½ p. c. for Non-participating.
32. Head Office in	London.	London.
33. Chairman,	John M. Clabon.	Sir Andrew Lusk, Bart.
34. Principal Officer,	G. W. Berridge.	G. Scott Freeman, Secy.

* For further information as to offices marked *, see Appendix.

**GENERAL DIRECTORY OF LIFE ASSURANCE OFFICES.
I. MIXED OFFICES.**

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Gresham.	Guardian.	Imperial.*	Lancashire.*
1848. Life. £100,000. £21,712. £3,082,976. 31st June 1882. £3,549,588. 71,281. 30th June 1885. 30th June 1885. 30th June 1888. Three years. Three, but provis. for fewer at Valuation. Four-fifths. Cash, Reduction of Pre- mium or Bonus at Directors' discretion. 32½ per cent. (average of 3 years, with Bonus). 30. Twelve months. 5 per cent. on Pre- mium. After 5 yrs., if age ad- mitted. <i>Qua</i> 3rd part. 6 months from date. Death by suicide or jus- tice during the 5 yrs. 3rd parties excepted, as above. One month. £363,026. 77,402. 739,318. 2,462,835. After 5 yrs., except W. Coast Africa, and Panama, if 30 attained all restriction void, save for sea or mili- tary men. For Assur. H.M. For En- dowm. Carlisle. For Anns. 17 offices and Gov. 1860. Assur. 3½ p. c. Ann. 4 p. c. London. W. G. Thornthwaite. Joseph Allen, Secy.	1821. Fire and Life. £2,000,000. £1,000,000. £1,395,515. 31st December 1881. £2,238,865, see note. 163,731. 485,180. 31st December 1884. 31st December 1884. 31st December 1889. Five years. Five. Four-fifths Profits from all Policies. Bonus, Cash, Reduct. of Prem. for life, or less time, or chang- ing to Endowment. Above 6½ per cent., average 11 years. 30. See 21 and 22. P. of 5 yrs., 13 ms. on fine. Less dur., on fine & cer. After 3 years conver- tible to Paid-up Policy. Aft. 18 ms., if age admt. <i>qua</i> ers. in pro., <i>qua</i> third part. from beg. Suicide in 13 months, not <i>qua</i> third parties. 30 days, or immediately £1,753,875. 81,065. 359,610. 1,693,226. After 5 years, if 30 at- tained, nor been out of limits, restrictions void, except Sea or Military man. Policies for 5 years and above, H.M. (5). For less H.M., End., Carl., Annts., Govt. 1860. 3 per cent. London. A. G. H. Gibbs (in rotat.) T. G. C. Browne, Secy.	1820. Life. £750,000. £189,822. £951,779. 31st October 1881. £1,049,347. 23,325. 31st October 1884. 31st January 1886. 31st January 1891. Five years. One. Four-fifths of whole profits of business. Bonus. 14 p. c. on £75,000 Cap. paid-up, aver. 5 yrs. 30. For Policies 3 years old, unincumbered, 1 year on small fine & Pro. Note for Prem. In new form Policy, Bonus applicable to pay Premiums. After 5 years, if age admt., except fraud. Suicide in 12 months, not <i>qua</i> third parties. Immediately. £535,947. 33,476. 162,551. 530,520. Assured, not being Sea- faring, may go to any part, if residence do not exceed 1 month. Whole Life, 17 Offices, Exp. Joint-Life, &c., H.M., 4 p. c. Srv., Car., 3 p. c. Annt., Govt. 1860, 4 per cent. London. John H. Hale. James Chisholm.	1852. Fire and Life. £272,968. £546,073. 31st December 1881. £656,519. 122,315. 341,211. 31st December 1884. 31st December 1884. 31st December 1889. Five years. One, except Reduced Premium Policies, when 6 required. Four-fifths whole Pro- fits Life business. Bonus. About 11½ p. ct. (average of 5 years). 30. 3 months, and evidence satisfactory to Direc- tors. 5 per cent. on Premium. Where 3, 6, 8, &c. Pre- miums paid, Policy kept up for 1, 2, 3, &c. years by loan from Co. at 5 per cent. After 5 yrs., if age ad- mitted, except fraud. Suicide in 6 months. £536,266. Nil. 58,089. 798,658. After 5 yrs., if Directs. satis., Whole-World licence grantd. Dur- ing 5 yrs. restricted limits allowed. H.M. 3½ p. c. for Policies 3 p. c. for Annuities. Manchester. Nathaniel Sheldermine, George Stewart.

* For further information as to offices marked *, see Appendix.

Notes.—Guardian has received, on transfer of business, London and Provincial Law, 1882-84
Funds, as estimated, £805,400.

GENERAL DIRECTORY OF LIFE ASSURANCE OFFICES.

I. MIXED OFFICES.

PARTICULARS OF INFORMATION.	Law Life.	Law Union.
1. When Instituted,	1823.	1854.
2. Fire, Life, Accident, Guarantee, or Marine,	Life.	Fire and Life.
3. Capital Subscribed,	£1,000,000.	£1,000,000.
4. Amount of Capital paid-up and invested,	£100,000 paid up. 924,570 accumd. from Profits, &c.	£80,000.
5. Amount of Life and Annuity Funds, as in Board of Trade Returns, published 1883,	£4,282,951	£575,074.
6. Date to which Account brought down,	31st December 1881.	30th November 1881.
7. Amount of Funds as at latest date,	£4,291,756.	£731,068.
8. Amount of other liabilities,	59,369.	36,643.
9. Amount of Fire Funds,		45,856.
10. Date to which latest Amount brought down,	31st December 1884.	30th November 1884.
11. Date of last Division of Profits,	31st December 1884.	30th November 1884.
12. Next Division of Profits takes place on	31st December 1889.	30th November 1889.
13. Period of Division once in every	Five years.	Five years.
14. Amount of Marine Funds,		
15. Number of Payments entitling to Profits,	Two.	One.
16. Proportion of Profits given to the Assured,	Four-fifths whole Pro- fits from all Poles, less reserve for next Div.	Whole Profits, except 5 p. ct. of Net Premia, which go to Shareh.
17. Profits applied by way of	Bonus, Cash, or Reduc- tion of Premium.	Bonus, Cash, or Reduc- tion of Premium.
18. Last Dividend to Shareholders, rate p. ct.,	Abt. 63½ p. ct. per ann. on Capital pd. up, on average of 5 years.	33½ per cent.
19. Days of Grace,	30.	30.
20. Time allowed thereafter if fine paid,	18 months.	Three calendar months.
21. Fine p. cent. for such on Sum Assured, with also certificate of good health,	Only Interest on Prem.	10s. per cent.
22. Conditions on which Policies not included in above are revived,	Reducd. Poles. equivit. to Sur. Value issued In Ld. No. Pra. Pol. Free isd. pro. to No. pd.	On payment of fine which Board think reasonable.
23. When is Policy indisputable?		Not at all.
24. What, besides non-payment, voids Policy?	Death by suicide, &c.; but Directors may pay what they think right, 3d part. not afd. Immediately.	Immediately.
25. Claim paid after Death and Title proved,	£3,176,381.	£530,412.
26. Invested on Mortgage,		
27. Invested in Government Stock,	25,796.	Nil.
28. Invested in Loans on Rates, and on Lands and Houses and Ground Rents,	1,318,330.	30,355.
29. Proportion of Funds invested otherwise,	855,538.	312,800.
30. Limits of Voyage and Residence allowed without Licence from the Society,	Europe, Aust'lia, N. Z., Holy Land, &c., and any other part (Asia excepted) N. of 30° N. L., and S. of 30° S. L., if not Mil. or Navl. H.M., 3 per cent.	Any part distant not less than 30° from Equator.
31. Table on which Valuations made and rate of interest per cent.,		H.M. for W.-L. Poles, End., and Term. Carriage for others, and Anna Sp. &c.
32. Head Office in	London.	London.
33. Chairman,	Ed. Tompson (in rotn.)	James Cudon.
34. Principal Officer,	Griffith Davies.	Frank M'Gedy.

GENERAL DIRECTORY OF LIFE ASSURANCE OFFICES.
I. MIXED OFFICES.

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and General.	Life Association of Scotland.*	Liverpool and London and Globe.*	London Assurance.*
1836. Life. £1,000,000. 898.	1838. Life. £400,000. £87,500.	1836. Fire, Life, and Anns. £3,917,520. £245,640.	1720. Fire, Life, and Marine. £896,550. £448,275.
£1,834,213. cember 1881. 237. 530.	£2,432,943. 5th April 1882. £2,993,690. 65,490.	£3,302,783. 31st December 1881. £3,650,650. 868,493. 1,600,000 R. & F. Fd. 1,102,800 Globe Ann. 31st December 1884. 31st December 1883. 31st December 1888. Five years.	£1,772,907. 31st December 1881. £1,845,189. 153,560. 788,066. R. & F. Fd. 31st December 1884. 31st December 1885. 31st December 1890. Five years. £155,481.
cember 1884. cember 1886. cember 1891. Five years.	5th April 1886. 5th April 1886. 5th April 1891. Five years.	1 to 4, accord. to time from Division. Four-fifths from parti- cipating Policies.	1 to 4, accord. to time from Division. About 55 p. c. in the past. Two-thirds for future.
Five.	Five.	Bonus, Reduction of Premium, or Cash.	Bonus, Reduction of Premium, or Cash.
Months of Total ts.	About 86½ per cent.	57½ per cent.	20 per cent.
Reduc. of Prem. years, or Cash.	Cash or Bonus depg. for amt. on expect. of life being attained, and appl. to red. Prem. £14, 13s. per cent. on average for 5 years.		
ent. on £160,000 tal, without Re- t.			
30. st 5 yrs. Sur. Val. o cover om. Prem.	30. 1 yr. ; after 3 yrs. Ord. con. into Pd. up Pol. 2½ per cent. per month.	30. One year.	30.
ble at discretion ard.		1s. p. c. per month. No certif. if 5 years old. Surrender Value ap- plicable during 18 months.	
, if in 1 year Policy date. i parties pro- d. Immediately. 124.	After 5 years, if age admitted. , £1,224,138 in Unit. King. 278,630 out of same.	From date, if age ad- mitted, unless fraud. Suicide, &c., in 1 year from Policy's date. Third Parties pro- tected. Immed. or 30 days aft. £1,886,878.	Suicide in 13 months from Policy's date. Third parties pro- tected. Immediately. £1,073,332.
250.	£1,502,768. 20,000.	168,926.	844,235.
535. 556.	169,658. 1,454,254.	1,093,197. 4,218,582.	1,148,115. 774,889.
ts dist. more than om Eqr. W.-W. f age 21 or above; of going within f Eqr., and resid. in usual limits. d HM. (5). 3 per	Aft. 5 yr. & age 30 attd. free resid. in most cases allwd. Under Cl. B from commnt. In both cases Milit., &c., service exc.	Europe, &c., and any part N. of 30° N. L. or S. of 30° S. L., 10s. p. c. clears, if Dirs. satis. Aft. 5 yrs. if 30 attd. W.-W. lics. on cond. HM. (5) for Ord. Wh. Life. HM. for others. Ann. Gov. 1860. 4 p. c. Liverpool & London. J. H. Loxdale. J. M. Dove, Gen. Man.	Europe, Egypt, &c., and any pt. N. of 33° N. L. or S. of 31° S. L. For all others ex. Pr. 25s. p. c. Third part. protected on cond. HM. (5) for Whole Life ab. 5 yrs. Other, HM. Ann. Gov. (1860). London. Lewis A. Wallace, Geo. A. H. Bailey, Acty.
London. B. Gregory. gernon Newton.	Edinburgh. Rt. Hon. Earl of Stair. John Turnbull Smith.		

* For further information as to Offices marked *, see Appendix.

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I. MIXED OFFICES.

PARTICULARS OF INFORMATION.	London & Lancashire.*	Midland Co
1. When Instituted,	1862.	1851.
2. Fire, Life, Accident, Guarantee, or Marine,	Life.	Fire, Life, Hai
3. Capital Subscribed,	£100,000.	£
4. Amount of Capital paid-up and invested,	£19,091	£32,500.
5. Amount of Life and Annuity Funds, as in	£242,915.	
Board of Trade Returns, published 1883,	31st December 1881.	24th March 18
6. Date to which Account brought down,	£352,178.	£39,874.
7. Amount of Funds as at latest date,	1,078.	5,240.
8. Amount of other liabilities,		27,347. Fb
9. Amount of Fire Funds,		
10. Date to which latest Amount brought down,	31st December 1884.	24th March 18
11. Date of last Division of Profits,	31st December 1882.	24th March 18
12. Next Division of Profits takes place on	31st December 1887.	24th March 18
13. Period of Division once in every	Five years.	Five yea
15. Number of Payments entitling to Profits,	1 to 4, according to	Three.
	time from Division.	
16. Proportion of Profits given to the Assured,	Four-fifths.	Four-fifths. N
		for period to
17. Profits applied by way of	Bonus, Reduct. of Pre-	Bonus, or Redt
	mium, or making	Premium.
	Policy pay'le in life.	
18. Last Dividend to Shareholders, rate p. ct.,	10 per cent.	20 per cen
19. Days of Grace,	30.	30.
20. Time allowed thereafter if fine paid,	12 months.	
21. Fine p. cent. for such on Sum Assured, with	5 per cent. on Prem.	
also certificate of good health,		
22. Conditions on which Policies not included	On application. Surr.	
in above are revived,	Value applied to	
	maintain Policy.	
23. When is Policy indisputable?	After 5 yrs. <i>qua</i> error	
	in Proposal, if age	
	admitted.	
24. What, besides non-payment, voids Policy?		
25. Claim paid after Death and Title proved,	Immediately.	
26. Invested on Mortgage,	£51,976.	£79,572.
27. Invested in Government Stock,	Nil.	Nil.
28. Invested in Loans on Rates, and on Lands	40,252.	8,718.
and Houses and Ground Rents,	280,119.	16,671.
29. Proportion of Funds invested otherwise,	For resid., anywhere	
30. Limits of Voyage and Residence allowed	(except parts of Asia)	
without Licence from the Society,	N. of 33° N. L. or S.	
	of 30° S. L. World-	
	wide Policies on con-	
	ditions.	
31. Table on which Valuations made and rate	H.M., except for earlier	H.M. For Annu
of interest per cent.,	portion, for wh. Mr	1860. 4 per c
	Saml. Brown's Table	
	'used. Int. 4 p. cent.	
	For earlier, 3 p. cent.	
32. Head Office in	London.	Lincoln.
33. Chairman,	Colonel Kingscote, C.B.	Hon. Alex. S.
		Melville.
34. Principal Officer,	Wm. Palin Clirehugh.	Benjamin Vic

* For further information as to Offices marked *, see Appendix.

**GENERAL DIRECTORY OF LIFE ASSURANCE OFFICES.
I. MIXED OFFICES.**

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General of Ireland.	North British and Mercantile.*	Northern.	Patriotic of Ireland.
1822. Life, Annuities. £1,000,000. ,000.	1809, Fire. 1823, Life. Fire, Life, & Annuities. £2,500,000. £625,000.	1836. Fire and Life. £3,000,000. £300,000.	1824. Life and Fire. £1,219,825. £121,984.
£262,893. December 1881. 492. 827. 000.	£3,508,105. 31st December 1881. £3,994,662. 243,506. 1,747,295.	£1,598,457. 31st December 1881. £1,870,744. 188,644. 741,063.	£102,242. 31st July 1882. £105,978. 30,100. 13,952.
December 1884. December 1882. December 1887. Five years. Three.	31st December 1884. 31st December 1885. 31st December 1890. Five years. Five.	31st December 1884. 31st December 1885. 31st December 1890. Five years. Five, but on entrance Policies share from beginning.	31st July 1885. 31st July 1884. 31st July 1889. Five years.
Two-thirds.	Nine-tenths of whole from Life Assurance Branch.	Whole from partn. Br., less 10 p. c. on Prem., and Com. to Agents.	Two-thirds.
onus or Cash.	Bonus, Cash, Reduct. of Prem. for Life, or 5 yrs., or makg. Pol. payable in life.	Bonus, Reduction of Premium, or Cash.	Bonus, Cash, or Reduc- tion of Premium.
4 per cent.	24 per cent.	25 per cent. (including Annual Bonus). One calendar month.	30.
30. endar months. 5 per cent. per um on premium. 5 yrs. and age 30 ined, convertible Free Policy propo- tional to Sur. Val.	30. Six months. Fine of 5 p. cent. per month on Premium. Surrend. Value paid if claimed in 5 yrs., or Paid-up Pol. if claim. in 6 mos. each from end of days of grace No forfeiture from in- accuracy in Proposal unless fraud. Suicide in 2 yrs. from Policy's date. Third parties protected. Immediately.	13 mo. may be allowed. No fine, but Certificate required. Free Pol. proport. to Sur. Value granted. Sur. Value held for 6 yrs. at disposal of Assured.	
le, &c., but third ties protected.			
Immediately.		Immediately, age hav- ing been admitted.	
3,433. 1,719.	£2,660,924. 461,685.	£537,243. 103,339.	£163,382. 7,197.
3,042. 5,125. Europe.	914,694. 2,573,160. Europe or Amer., Africa, & Australia, N. of 30° N. L. or S. of 30° S. L., & in Egypt, &c. After 5 yrs. restr. void, un- less Dirs. have limd. Free from date if Drs. satisfied.	587,349. 1,872,520. Anywhere not nearer than 33° to Eqr., Aus- tralia & Japan free. After 3 yrs. & age 30 attained, Policy free from all restrictions.	5,020. 96,415.
for Assurances. liale for Annuit. r. cent.	H.M. for Assur., N. B. & M., but Con. & End., Carlisle. Annt. Govnt. 1829. Int. 3½, but Surv., 3 p. c. Edinburgh and London. David Davidson.	H.M., 3 p. c. for Assur. Gov. 1875, for Anns.	Carlisle for Non-parti- cipating. H.M. for Participating. 3 p. cent.
Dublin. Hamilton Reid.		Aberdeen and London. Sir Wm. Miller, Bart.	Dublin. Lucius O. Hutton.
old Engelbach.	A. Gillies Smith.	James Valentine.	Bernard H. O'Reilly.

* For further information as to Offices marked *, see Appendix.

**GENERAL DIRECTORY OF LIFE ASSURANCE OFFICES.
I. MIXED OFFICES.**

PARTICULARS OF INFORMATION.	Pelican.	Positive, Limited.
1. When Instituted,	1797.	1870.
2. Fire, Life, Accident, Guarantee, or Marine, ..	Life.	Life.
3. Capital Subscribed,	None.	£69,775.
4. Amount of Capital paid-up and Invested, ..	£159,543.	£69,775.
5. Amount of Life and Annuity Funds, as in Board of Trade Returns, published 1883, ..	£1,104,882.	£190,223.
6. Date to which Account brought down, ..	31st December 1881.	31st December 1881.
7. Amount of Funds as at latest date, ..	£1,155,568.	£274,664.
8. Amount of other liabilities,	39,123.	10,333.
9. Amount of Fire Funds,		
10. Date to which latest Amount brought down, ..	31st December 1884.	31st December 1884.
11. Date of last Division of Profits,	31st December 1885.	31st December 1886.
12. Next Division of Profits takes place on ..	31st December 1890.	31st December 1891.
13. Period of Division once in every	Five years.	Five years.
15. Number of Payments entitling to Profits, ..	Five.	
16. Proportion of Profits given to the Assured,	Four-fifths of Partici- pating Branch.	Four-fifths.
17. Profits applied by way of	Bonus, Reduction of Premium, or Cash.	Bonus, Reduction of Premium, or Reduc- ing No. of Payments, or Cash.
18. Last Dividend to Shareholders, rate p. ct.,	About 12½ (with Bonus) during 5 years.	About 8½ per cent. aver- age in 3 years.
19. Days of Grace,	80.	80.
20. Time allowed thereafter if fine paid,	Six months.	Twelve months.
21. Fine p. cent. for such on sum Assured, with also certificate of good health,	One Shilling p. month.	Only Int. on Prem. at 5 p. cent. p. annum.
22. Conditions on which Policies not included in above are revived,	Paid-up Policy equivt. to Surrender Value if not under £50.	In Lim. Term Policy at outset each year Pos- itive Note given se- curing propor. of Pol. from further paym.
23. When is Policy indisputable?		
24. What, besides non-payment, voids Policy?	Suicide, &c., in 3 yrs. from date. Third par. prot. if under Assign. 3 mos. before death. Three months.	Three months.
25. Claim paid after Death and Title proved, ..		
26. Invested on Mortgage,	£725,960.	£19,500.
27. Invested in Government Stock,	74,494.	NIL.
28. Invested in Loans on Rates, and on Lands and Houses and Ground Rents,	30,024.	24,385.
29. Proportion of Funds invested otherwise, ..	523,756.	310,887.
30. Limits of Voyage and Residence allowed without Licence from the Society,	In any part N. of 33° N. L., not in Asia, or in any part S. of 33° S. L., or in Egypt N. of 25° N. L., Holy Land, &c.	Free Policies granted if age 25 attained, & obvious from Occup. &c., no intention of going to India or other places unfav. to European life.
31. Table on which Valuations made and rate of interest per cent.,	H.M. for Assur. Carlis. for Anna. 3p.c. Non- part. 3½ p. c. Part. 3½ Annuities. London.	Eng. Life Table No. 3 for Home bus. For Ind. bus. Spec. Tab. 4 p. c. Valn. 4 p. c. London.
32. Head Office in		
33. Chairman,	Octavius E. Coope.	Hon. E. R. Bourke.
34. Principal Officer,	Robert C. Tucker.	A. G. Mackenzie

GENERAL DIRECTORY OF LIFE ASSURANCE OFFICES.
I. MIXED OFFICES.

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Provident.*	Provincial.	Prudential, Limited, Ordinary Branch.	Queen.*
1806. Life. £250,000. 79. £2,156,237. ember 1881. 277. 283. ember 1884. ember 1882. ember 1887. ive years. to 4 years, ac- g to distance Division. ion wh. Policy- rs' Premis. bear oprietors' Cap. ic. 96½ per cent. or Cash. ½ p. c., p. ann. (Bonus includ.). 30. me year. small. Policies in of Surrender as. in 12 months, Premiums re- d. Third par- rotected. ee months. 75. 10. 90. 64. ia, N. Zealand, Colony, and any urther than 33° Eqr. Extra for , ½ Ann. Prem. 5 yr. & age 30, d save for Mili- -c., service. per cent. London. dd (in rotation). mont, <i>Man. Dir.</i> ns, <i>Act. & Sec.</i>	1852. Life. £200,000. £29,821. £265,897. 31st December 1881. £298,355. 5,286. 31st December 1884. 31st December 1885. 31st December 1890. Five years. Three. Four-fifths. Bonus, Reduction of Premium, or Cash. 2½ per cent. 30. £45,272. Nil. 75,803. 212,387. H.M. for Assurances. Davies' Equitable for Annuities. Both 3½ per cent. interest. Wrexham. John Francis.	1848. Life. £100,000. £80,028 Indust. Bran. £744,583. 31st December 1881. £1,212,715. 13,084. 31st December 1884. 31st December 1886. 31st December 1891. Five years. One. After 1876 nine-tenths Ord. Branch Profits. Bonus, or Reduction of Premium. Average 10 yrs. to 1883, 149 per ct. per ann. One calendar month. After 5 yrs., Paid-up Policies obtainable. After 5 yrs., but third parties protected. Immediately. £437,595. 245,382. 138,679. 404,143. Above 32° from Equa- tor after 1 year. In Ordinary Branch, H.M., for Assurances. Government, 1860, for Annuities. 3 p. c. London. Edgar Horne. T. C. Dewey and others.	1857. Life and Fire. £1,800,350. £180,035. £408,464. 31st December 1881. £503,842. 250,613. 170,000. 31st December 1884. 31st December 1883. 31st December 1888. Five years. Three. Three-fourths entire Profits on all Pals. Bonus, Cash, Reduc- tion of Premium, or Free Bonus Policy. 10 per cent. 30. Surrender Value ap- plic. to pay Premium. Sur. Value applicable as in No. 20. After 5 years, if age admitted. Immediately, age being admitted. £204,635. Nil. 245,848. 654,007. Europe, Asia N. of 30° N. L. and S. of 29° S. L., America N. of 35° N. L. and S. of 30° S. L., Aus- tralia, and N. Zeal., &c. H.M., 3½ per cent. Liverpool and London. Thos. H. Jackson. Thos. Walton Thomson.

* For further information as to Offices marked *, see Appendix.

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**GENERAL DIRECTORY OF LIFE ASSURANCE OFFICES.
I. MIXED OFFICES.**

PARTICULARS OF INFORMATION.	Rock.*	Royal.*
1. When Instituted,	1806.	1845.
2. Fire, Life, Accident, Guarantee, or Marine, ..	Life.	Fire and Life.
3. Capital Subscribed,	£1,195,873.	£2,000,000.
4. Amount of Capital paid-up and Invested, ..	£1,195,873.	£289,545.
5. Amount of Life and Annuity Funds, as in Board of Trade Returns, published 1883, ..	£2,064,351.	£2,737,858.
6. Date to which Account brought down, ..	31st December 1881.	31st December 1881.
7. Amount of Funds as at latest date, ..	£1,861,421.	£3,058,767.
8. Amount of other liabilities,	36,591.	421,153.
9. Amount of Fire Funds, .. .. .	.. .. .	1,850,000 R. & F. F.
10. Date to which latest Amount brought down, ..	31st December 1884.	31st December 1884.
11. Date of last Division of Profits,	19th August 1882.	31st December 1884.
12. Next Division of Profits takes place on ..	19th August 1889.	31st December 1889.
13. Period of Division once in every	Seven years.	Five years.
14. Amount of Fire Funds, .. .. .	.. .. .	.. .. .
15. Number of Payments entitling to Profits, ..	Two.	Three.
16. Proportion of Profits given to the Assured, ..	Two-thirds, with $\frac{1}{2}$ int. on Paid-up Capital.	Three-fourths.
17. Profits applied by way of	Bonus, or Reduction of Premium.	Bonus, Reduction of Premium, or Cash.
18. Last Dividend to Shareholders. rate p. ct. ..	About $7\frac{1}{2}$ per cent.	46 $\frac{1}{2}$ per cent.
19. Days of Grace,	30.	30.
20. Time allowed thereafter if fine paid,	Extension on application, and small fine.	Three months.
21. Fine p. cent. for such on sum Assured,* with also certificate of good health, .. .. .	.. .. .	10s. per cent. on Premium.
22. Conditions on which Policies not included in above are revived,	After 2 years, Paid-up Policies issued.	Limited Payments Class, convertible to Limited Policy.
23. When is Policy indisputable?	.. .. .	.. .. .
24. What, besides non-payment, voids Policy?	Death by suicide or justice. Third parties protected.	.. .. .
25. Claim paid after Death and Title proved, ..	One week.	Three mos.; or immediate if Directors see fit.
26. Invested on Mortgage,	£1,684,406.	£1,808,851.
27. Invested in Government Stock,	352.	193,048.
28. Invested in Loans on Rates, and on Lands and Houses and Ground Rents,	172,074.	915,432.
29. Proportion of Funds invested otherwise, ..	1,237,053.	2,702,139.
30. Limits of Voyage and Residence allowed without Licence from the Society,	Anywhere more than 33° N. or 30° S. of Equator; also in Japan, Egypt, Holy Land, &c.	Residence allowed free in many parts where extra Premium usually charged.
31. Table on which Valuations made and rate of interest per cent.,	Northampton Table. 8 p. ct., except on Policies without participation for whole life, for which 4 p. ct. London.	H.M. for Assurances. Contingent Assur. & Child. Endowts. Carlisle. Annuities, Gov., 1875. 8 p. ct. Liverpool.
32. Head Office in	W. A. Bevan (in rotat.).	Ralph Brocklebank.
33. Chairman, .. .. .	.. .. .	.. .. .
34. Principal Officer,	George S. Crisford.	John H. M'Laren.

* For further information as to Offices marked *, see Appendix.

**GENERAL DIRECTORY OF LIFE ASSURANCE OFFICES.
I. MIXED OFFICES.**

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Royal Exchange.*	Sceptre, Limited.	Scottish Economic.	Scottish Imperial.
1720. Life, Fire, and Marine. £689,220. £1,997,464. 30th April 1882. £2,073,756. 879,733. 218,342. 30th April 1885. 31st December 1885. 31st December 1890. Five years. £224,488. Three. Two-thirds. Bonus, Reduction of Premium, or Cash. 20 per cent. 30. Twelve months. Only 5 p. ct. per ann. on Premium. Paid-up Policies grant- ed where no debt. After 13 mon. Third parties protected. Death by suicide or justice in 13 months. Third parties protec- ted. Immediately. £1,643,674. 460,461. 775,152. 1,206,252. N. of 33° N. L., or S. of 30° S. L., Australn. Colonies, any place on African Coast of Mediterr., Egypt, &c.	1864. Life. £45,425. £10,485. £155,671. 31st December 1881. £253,727. 71. 31st December 1885. 31st December 1883. 31st December 1888. Five years. Two. Four-fifths. Bonus, Reduction of Premium, or mak- ing Policy payable in life. About 6½ per cent. 30. Twelve months. Interest on Arrear only. Free Policy granted after 5 years, if As- sured so desire. After 3 years, if age admitted, except fraud. Death by suicide or justice, in 12 months from Policy date. Immediately. £79,772. Nil. 56,873. 127,638. Algiers, Australia, Br. America, Egypt (except So. of Cairo), Europe, Madeira, Natal, New Zealand, Tasmania, U. S. A. (except New Orleans) Carlisle, 3½ per cent.	1885. Life and Accident. £29,077. Not in B.T.Ret. 9th November 1886. 9th November 1890. Five years. One. Bonus, Cash, Reduc- tion for 5 yrs.; Extinc- tion Prem.; Accelg. payt., all after Bonus vests. Calendar month. Only Interest, 5 per cent. per annum on Premium. No Fine. Surrender Value ap- plicable to pay Pre- mium. After exh. revivable on Cert. of g. h. All Ordinary from issue. (Re-Non-payment, see 20-22). Fraud at inception. Suicide in 6 months. Immediately.	1865. Life. £500,000. £50,000. £130,316. 31st December 1881. £187,892. 16,737. 31st December 1884. 31st December 1885. 31st December 1890. Five years. From 4 to 6, according to nature of Policy. Nine-tenths. Bonus. 7½ per cent. 30. One month. £60,507. Nil. 123,175. 70,947. All Ordinary World- wide from issue, and once issue, no extra Premium for Foreign Residence. H.M., 4 per cent. Glasgow. Alex. Drew. T. Wilkinson Watson.
London. James S. Hodgson, Gov. Thomas B. Winsor, Act.	London. W. H. Whiteman (in rot.) John G. Phillips.	Edinburgh. W. Ferguson (of Kin- mundy). J. Moody Stuart.	Glasgow. Alex. Drew. T. Wilkinson Watson.

* For further information as to Offices marked *, see Appendix.

I. MIXED OFFICES.

PARTICULARS OF INFORMATION.	Scottish Life, Limited.	Scottish Metropolitan*
1. When Instituted,	1881.	1876.
2. Fire, Life, Accident, Guarantee, or Marine, ..	Life and Accident.	Life.
3. Capital Subscribed,	£250,000.	£80,000.
4. Amount of Capital paid-up and Invested, ..	£50,000.	£24,000.
5. Amount of Life and Annuity Funds, as in ..	£4,148.	£24,974.
Board of Trade Returns, published 1883, ..		
6. Date to which Account brought down, ..	31st May 1882.	20th May 1882.
7. Amount of Funds as at latest date, ..	£30,062.	£59,689.
8. Amount of other liabilities,	9,048.	1,766.
9. Amount of Fire Funds,		
10. Date to which latest Amount brought down, ..	31st May 1885.	31st December 1885.
11. Date of last Division of Profits,	None yet.	None yet.
12. Next Division of Profits takes place on ..		
13. Period of Division once in every	Two.	
15. Number of Payments entitling to Profits, ..		
16. Proportion of Profits given to the Assured, ..	Nine-tenths.	
17. Profits applied by way of	Bonus, or to extinguish ..	Bonus, but none till ..
	Premiums due after ..	Premiums accumula- ..
	a certain age.	ted at 4 p. ct. amount ..
18. Last Dividend to Shareholders, rate p. ct., ..	No Dividend yet.	to Sum Assured.
19. Days of Grace,	One calendar month.	About 5 per cent. on ..
20. Time allowed thereafter if fine paid,	Surrender Val. applied ..	average of 5 years.
	to keep Policy in ..	30.
	force when needed.	Twelve months.
21. Fine p. cent. for such on sum Assured, with ..	See 20.	2½ per cent. per month ..
also certificate of good health,		on Premium.
22. Conditions on which Policies not included ..	See 20.	Surrender Value app- ..
in above are revived,		licable to keep up ..
		Policy.
23. When is Policy indisputable?	After 5 yrs., age being ..	
	admitted, <i>qua</i> errors ..	
	or omissions in Pro- ..	
	posal, &c.	
24. What, besides non-payment, voids Policy? ..		Suicide in 13 months ..
		from commencement ..
25. Claim paid after Death and Title proved, ..	One month.	of risk.
		Immediately.
26. Invested on Mortgage,	£22,225.	£36,007.
27. Invested in Government Stock,	4,999.	NIL.
28. Invested in Loans on Rates, and on Lands ..	1,288.	14,776.
and Houses and Ground Rents,	60,598.	34,672.
29. Proportion of Funds invested otherwise, ..	More than 33° N. L. ..	After 5 years, Free, if ..
30. Limits of Voyage and Residence allowed ..	or 31° S. L. (ex. Asia).	30 attained and ..
without Licence from the Society,	After 5 years, Free, ..	limits (above 35° N. ..
	on conditions.	L. or 30° S. L.) not ..
		exceeded.
31. Table on which Valuations made and rate ..	No Valuation yet.	HM., 4 per cent.
of interest per cent.,		
32. Head Office in	Edinburgh.	Edinburgh.
33. Chairman,	John Cowan.	Rt. Hon. J. H. A. Mac- ..
		donald.
34. Principal Officer,	David Paulin.	Wm. Gibson Bloxson.

* For further information as to Offices marked *, see Appendix.

**GENERAL DIRECTORY OF LIFE ASSURANCE OFFICES.
I. MIXED OFFICES.**

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Scottish Provincial.*	Scottish Temperance, Limited.	Scottish Union and National.*	Standard.*
<p>1825. Life and Fire. £1,000,000. £60,000.</p> <p>£1,191,563. 31st January 1882. £1,403,772. 76,411. 71,157.</p> <p>31st January 1886. 31st January 1882. 31st January 1887. Five years. Five.</p> <p>About 92½ per cent. at last Division. Cash, Reduction of Premium for whole or less period, or making payable in life. 23½ per cent., average of 5 years. 30. Six calendar months.</p> <p>2½ per cent. per month on Premiums. Paid-up Policy granted for sum representing Value of Policy.</p> <p>After 5 years, if age admitted, and Ordinary Premium and extra risks paid. Death by suicide or justice. Third parties protected. Immediately.</p> <p>£325,614. NIL.</p> <p>80,507. 1,205,219. Above 30° from Equator (if not Military, &c.), and British Colonies in South Africa and Australia, Japan, Palestine, &c.</p> <p>H.M., 3½ per cent.</p> <p>Aberdeen. John Webster.</p> <p>Thomas Y. Wardrop.</p>	<p>1883. Life and Accident. £90,000. £22,500.</p> <p>Published 1825, £915. 31st December 1883. £7,254. 2,034.</p> <p>31st December 1885. None yet. 31st December 1888. Three years. Under Immed., 1 year. Undl. Deferred, when Prem. accumd. equals sum Assured, at 4 p.c. Four-fifths.</p> <p>Bonus, Reduction of Premium, making Policy payable in life, or Cash. 3½ per cent.</p> <p>30.</p> <p>Under Non-Forfeiture Scheme, &c., proportion of Policy corresponding to proptn. of Payts. held as Pd.-up.</p> <p>After 5 years, if age admitted, indisput., <i>qua</i> errors in Proposal.</p> <p>One month.</p> <p>£5,205.</p> <p>NIL.</p> <p>847. 26,336. Above 33° N. L. and 31° S. L. (except Asia). After 5 years, Free, on conditions.</p> <p>Glasgow. John Wilson.</p> <p>Adam K. Rodger.</p>	<p>1824. Life and Fire. £4,513,140. £282,571.</p> <p>£2,241,278. 31st December 1881. £2,546,595. 133,861. 227,288.</p> <p>31st December 1884. 31st December 1884. 31st December 1889. Five years. Four.</p> <p>Nine-tenths.</p> <p>Bonus, Reduction of Premium for next 5 yrs. or life, and Cash. 18 per cent.</p> <p>One calendar month. Reasonable time.</p> <p>No fine; but small adtn. to Prem. for Interest. Paid-up Policy equivalent to Surrender Value issuable after 3 years Premiums paid.</p> <p>After 3 years, if age admitted, save for fraud.</p> <p>Suicide in 6 months. Third parties protected. Immed., in early Bonus Pcls. Others, 3 mon.</p> <p>£2,013,657. 6,920.</p> <p>169,623. 1,000,115. Above 33° N. L. and 30° S. L. (excl. Asia), if not Milly., &c.; also Austl. within Tropics. Egypt, N. of 2d Cataract, Japan, Palestine, &c.</p> <p>Carl. for Assur. Govt. for Annts. 3 p. ct. for all save S. Un. N.-P. Pls., &c., 3½ p. c. Edinburgh. Wm. Dickson (in rot.).</p> <p>John M. M'Candlish.</p>	<p>1825. Life. £500,000. £120,000.</p> <p>£5,531,457. 15th November 1881. £6,033,298. 263,230.</p> <p>15th November 1884. 15th November 1885. 15th November 1890. Five years. Five.</p> <p>Abt. 81½ p.c. of wh. Prf., less 10 p. c. to Props. Bonus, Reduction of Premium for period of years or life, and Cash. £20, 16s. 8d. per cent. Includes Bonus. 30. (1) 13 mon.; (2) 5 mon. For respective Fines, see Prospectus. See 20.</p> <p>Paid-up Policy for Surrender Value issued, after some years.</p> <p>After 5 years, if age admitted, <i>qua</i> Proposal, &c.</p> <p>One month.</p> <p>£4,344,712. 38,218.</p> <p>286,642. 1,796,956. Whole-World Licence, if 25 attained and Directors satisfied no intention to go beyond Europe.</p> <p>English No. 1, Males, 3 per cent. For Annuities, Governmt. (John Finlaison). Edinburgh. Robt. Hunter (by rot.).</p> <p>Spencer C. Thomson.</p>

* For further information as to Offices marked *, see Appendix.

I. MIXED OFFICES.

PARTICULARS OF INFORMATION.	Star.	Sun Life.
1. When Instituted,	1843.	1810.
2. Fire, Life, Accident, Guarantee, or Marine, ..	Life.	Life.
3. Capital Subscribed,	£100,000.	£480,000.
4. Amount of Capital paid-up and invested, ..	£5,000.	£373,388.
5. Amount of Life and Annuity Funds, as in Board of Trade Returns, published 1883, ..	£1,866,738.	£1,711,990.
6. Date to which Account brought down, ..	31st December 1881.	24th June 1882.
7. Amount of Funds as at latest date, ..	£2,202,515.	£1,705,631.
8. Amount of other liabilities,	20,797.	43,846.
9. Amount of Fire Funds,		
10. Date to which latest Amount brought down, ..	31st December 1884.	24th June 1885.
11. Date of last Division of Profits,	31st December 1885.	24th June 1882.
12. Next Division of Profits takes place on ..	31st December 1890.	24th June 1887.
13. Period of Division once in every	Five years.	Five years.
15. Number of Payments entitling to Profits, ..	Three.	Two.
16. Proportion of Profits given to the Assured, ..	Nine-tenths.	Four-fifths.
17. Profits applied by way of	Bonus, Reduction of Premiums, or making Policy payable in life.	Bonus, Reduction of Premiums, or Cash.
18. Last Dividend to Shareholders, rate p. ct., ..	116 per cent. for 5 last years on average (including Bonus).	About 21½ p. c. on average of 5 yrs. to 1882.
19. Days of Grace,	30.	15.
20. Time allowed thereafter if fine paid,	Six months.	Three calendar months.
21. Fine p. cent. for such on sum Assured, with also certificate of good health,	Small fine.	There is fine.
22. Conditions on which Policies not included in above are revived,	In Limited Number of Payments Policies, after 3 payts. Paid-up Policy issuable prop. to num. of Payments.	Paid-up Policy issued in lieu of Surrender Value.
23. When is Policy indisputable?	After 5 years, if age admitted, <i>qua</i> Proposal, &c., unless fraud.	
24. What, besides non-payment, voids Policy? ..	Death by suicide or justice, but third parties protected.	Death by suicide or justice within 5 yrs., but third parties protected.
25. Claim paid after Death and Title proved, ..	14 days.	Immediately.
26. Invested on Mortgage,	£558,502.	£482,246.
27. Invested in Government Stock,	Nil.	Nil.
28. Invested in Loans on Rates, and on Lands and Houses and Ground Rents,	202,492.	346,209.
29. Proportion of Funds invested otherwise, ..	1,467,228.	1,294,410.
30. Limits of Voyage and Residence allowed without Licence from the Society,	Above 33° N. L. and 30° S. L. for Voyage (except Asia). Residence in N. and S. America within above, & in Madeira, &c., S. of 24° S. L.	Above 35° N. L. and 30° S. L. (except Asia). In Egypt, Madeira, Natal, Syria, except Seafaring. After 5 years, Free, on conditions.
31. Table on which Valuations made and rate of interest per cent.,	H.M. (5) for Assurances. Carlisle for Annuities. 3½ per cent.	Carlisle, 3 per cent.
32. Head Office in	London.	London.
33. Chairman,	Sir Wm. M'Arthur.	H. Morton Farquhar.
34. Principal Officer,	W. W. Baynes.	John G. Priestly.

**GENERAL DIRECTORY OF LIFE ASSURANCE OFFICES.
I. MIXED OFFICES.**

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Union.	United Kent, Limited.	Universal.	University.
1714. 1813. Fire. Life. £30,000. £300,000.	1802. 1824. Fire. Life. £133,805. £100,000.	1834. Life. £500,000.	1825. Life. £600,000.
£980,353. 30th June 1882.	£351,287. 25th March 1882.	£1,012,700. 31st Dec., Eng.; 30th Nov. 1881, India.	£989,385. 1st May 1882.
£1,097,503. 81,934. 741,449. 30th June 1885.	£359,859. 5,403. Not statd. B. of T. Sch. 25th March 1885.	£1,022,737. 23,883.	£974,388. 37,454.
30th June 1882. 30th June 1887. Five years. Five. Four-fifths. Bonus, Reduction of Premium, or Cash.	25th March 1882. 25th March 1887. Five years. Four-fifths. Bonus, Reduction of Premium, or Cash.	31st Dec., Eng.; 30th Nov. 1884, India. 31st December 1886. 31st December 1887. Year. Six. Three-fourths. Bonus or Reduction of Premium.	1st May 1885. 1st May 1885. 1st May 1890. Five years. Six. Nine-tenths. Bonus, Cash, or Reduc- tion of Premium.
On average of 10 years to 1885, 15½ per cent. from Life Funds. 101½ per cent. from Fire Funds. 30. Three months.		23½ per cent.	12½ per cent. p. annum (with Bonus), on average of last 5 years.
Small fine.	Three months.	One calendar month. 3 mo., and at discret. of Board, 6 months. 10s. for 3 mos., and at Drs., discret. 6 mo.	30. At dis. of Court of Drs. Practly. within 1 yr. 2s. per cent. per month.
Free Paid-up Policy issued for equivalent value, if desired.	Only 5 per cent. inter- est on Premiums.		See 20.
	Free Paid-up Policy issued on system adopted by Directors.		
No claim disputed, ex- cept for palpable fraud.	Policy indisputable on all grounds except fraud.	Death by suicide or justice, but third parties protected.	Untrue allegn. in De- claration or Proposal. Death by sui. or jus. in 12 m. 3d par. pro. Three calendar months.
Three months.	Immediately, if age ad- mitted.	Three months.	
£985,631. 146,567.	£385,884. 23,520.	£283,591. Nil.	£362,690. 55,421.
85,362. 733,326.	20,001. 69,662.	112,744. 718,943.	85,934. 537,697.
Above 33° from Equator on application. Aus- tralia, Cape, Egypt, Europe, Holy Land, Mader, Natal. Free, if Drs. satisfied no intent. to go abroad. H.M., 3 per cent.	Free limits have been considerably ex- tended.	Europe for European risks. Any part of British India, Ceylon, China, or Japan for assured in India.	Europe and United States, Canada. Otherwise licence to be obtained, and ext. Premium paid as Directors fix.
London. Stephen Soames. Wm. Wallace, Acty.	For Particg., Hardy's. For Non-Partg., H.M. (5). Annts., Davies' Equit., 3 p. c. 2½ p. ct. for Fem. Annts. Maidstone. Charles John Plumptre. W. L. Seyfang.	For Eng. Pols., special Tbl. with mort. above Carl. For Ind. Pols., spl. Tbl. from Exp. H.E.I. Co.'s ser. 3 p.c. London. John Fairley Leith. Frederick Hendriks.	Table by late Griff. Davies agreeing with published Premiums at 3 per cent. interest. 3 per cent. London. J. Copley Wray. Charles McCabe.

GENERAL DIRECTORY OF LIFE ASSURANCE OFFICES.

I. MIXED OFFICES.

PARTICULARS OF INFORMATION.	Westminster and General.	West of England.
1. When Instituted,	1836.	1807.
2. Fire, Life, Accident, Guarantee, or Marine, ..	Life.	Fire and Life.
3. Capital Subscribed,	£100,000.	£600,000.
4. Amount of Capital paid-up and invested, ..	£25,983.	£210,000.
5. Amount of Life and Annuity Funds, as in Board of Trade Returns, published 1883, ..	£430,913.	£992,790.
6. Date to which Account brought down, ..	31st December 1881.	31st December 1881.
7. Amount of Funds as at latest date, ..	£462,493.	£934,008.
8. Amount of other liabilities,	9,998.	53,543.
9. Amount of Fire Funds, .. .. .	.. .. .	53,898.
10. Date to which latest Amount brought down, ..	31st December 1884.	31st December 1884.
11. Date of last Division of Profits,	31st December 1881.	31st December 1882.
12. Next Division of Profits takes place on ..	31st December 1886.	31st December 1887.
13. Period of Division once in every	Five years.	Five years.
15. Number of Payments entitling to Profits, ..	Two.	Two.
16. Proportion of Profits given to the Assured, ..	Four-fifths.	Four-fifths.
17. Profits applied by way of	Bonus, Reduction of Premium, or Cash.	Bonus, Reduction of Premium, or Cash.
18. Last Dividend to Shareholders, rate p. ct., ..	12½ per. cent. per ann. (with Bonus), on av. 10 years to 1882.	About 12 p. c. p. ann. (with Bonus) on av. 10 years to 1883.
19. Days of Grace,	30.	30.
20. Time allowed thereafter if fine paid,	60 days & without fine.	Thirteen months.
21. Fine p. cent. for such on Sum Assured, with also certificate of good health,	See 20.	Small fine.
22. Conditions on which Policies not included in above are revived,	After 5 yrs., free paid-up Policy granted for sum mut. agreed on.	On Scheme of 12, &c. payts., after 3, sum Assured secured prop. to whole stipulated payments (less deductions). Indisputable, <i>qua</i> mistake at beginning, if age admitted.
23. When is Policy indisputable? .. .. .	.. .. .	.. .. .
24. What, besides non-payment, voids Policy? ..	Death by suicide or justice, but Dir. empowd. to repay Prems. within sum orig'ally Assrd. 3d part. prot. Three months.	Immediately.
25. Claim paid after Death and Title proved, ..	£55,450.	£493,982.
26. Invested on Mortgage,	47,037.	95,000.
27. Invested in Government Stock, .. .. .	.. .. .	.. .. .
28. Invested in Loans on Rates, and on Lands and Houses and Ground Rents,	6,440.	424,072.
29. Proportion of Funds invested otherwise, ..	389,547.	233,395.
30. Limits of Voyage and Residence allowed without Licence from the Society,	Europe, and when 3d parties concerned, Whole-World Li'nce. granted on small additional Premium.	Above 33° N. L. and 30° S. L., World-wide Pol. for sing. <i>extra</i> 10/ p. c. if Dir. satisfied, save for Military, &c.
31. Table on which Valuations made and rate of interest per cent.,	H.M., 3 per cent.	For Insurances H.M. For Anns Govt. Fem. 3 p. c. for Policies under 22 and for Anns. 4 per cent.
32. Head Office in	London.	Exeter.
33. Chairman,	Albert Mott.	L. Shapter.
34. Principal Officer,	Edward Cutbush.	R. S. Gray.

GENERAL DIRECTORY OF LIFE ASSURANCE OFFICES.
I. MIXED OFFICES.

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Whittington.	Yorkshire.*
1855. Life. £23,333.	1824. Fire and Life. £50,000.
£100,000	£500,000.
£96,834.	£540,469.
30th April 1882. £121,817. 6,488.	28th February 1882. £570,699. 17,992. 232,017.
30th April 1885. 30th April 1884. 30th April 1887. Three years. Two. Four-fifths. Bonus makg. Pol. pay. in life, Redn. of Pr. for 3 yrs. or life. 8½ per cent.	28th February 1885. 1st March 1885. 1st March 1890. Five years. Four. Four-fifths. Bonus, Cash, or Re- duction of Prem. 36 p. c. p. ann last 5 yrs. from Fire Fds. and Capital.
30. Twelve months.	30. Six months. Only 5 p. c. p. ann. on Premium.
After 5 yrs. Free Pol. issued or actuarial val. paid, if no loan.	
After 5 yrs., age adm. in Wh. Life and En- dowmt., exc. fraud. Death by suicide or justice.	After 3 yrs. if age ad- mitted, exc. fraud. Death by suicide or justice.
One month. £20,445. 8,425.	Immediately. £387,874. 24,394.
15,888. 106,880.	290,571. 167,869.
After 5 yrs. in Wh. Life and Endowmt., if 30 attd. Europe, Cana., U.S.A. N. of 35° N. L., Austri., N. Zeal., Natal, and Cape, ex. Seafaring.	After 1st yr. Free, age 25 attained, and no intention of going abroad, Military, &c., excepted.
H.M., 4 per cent.	H.M. for Gen. Pol. For others, Carl. Ann., Equit. (Davies). Ass., 3 p. c., Ann. 3½ p. c.
London. J. Ebenezer Saunders. Alfred T. Bowser.	York. Rt. Hon. Lord Wenlock. J. A. Cunningham, Sec. & Gen. Man.

* For further information as to Offices marked *, see Appendix.

II. MUTUAL OFFICES.

PARTICULARS OF INFORMATION.	British Empire.*	Clergy Mutual.*
1. When Instituted,	1847.	1829.
2. Fire, Life, Accident, Guarantee, or Marine, ..	Life.	Life.
5. Amount of Life and Annuity Funds, as in Board of Trade Returns, published 1883, ..	£842,522.	£2,877,192.
6. Date to which Account brought down, ..	31st December 1881.	31st May 1882.
7. Amount of Funds as at latest date, ..	£1,028,216.	£3,372,818.
8. Amount of other liabilities, ..	16,591.	62,278.
10. Date to which latest Amount brought down, ..	31st December 1884.	31st May 1885.
11. Date of last Division of Profits, ..	31st December 1884.	31st May 1886.
12. Next Division of Profits takes place on ..	31st December 1887.	31st May 1891.
13. Period of Division once in every ..	Three years.	Five years.
15. Number of Payments entitling to Profits, ..	Four.	From 0 to 5 years, according to dist. in time from next Val.
17. Profits applied by way of	Cash, Bonus, or Reduction of Prem.	Cash, Reduction of Premium, or Bonus.
19. Days of Grace,	30.	Six weeks.
20. Time allowed thereafter if fine paid, ..	One year.	Free paid-up Profits Policies issued on request.
21. Fine p. cent. for such on Sum Assured, with also certificate of good health, ..	Not above £1, with Int. on Premium.	See 20.
22. Conditions on which Policies not included in above are revived, ..	Three Prems. paid, Sur. Val. applicable to keep-up Pol., or Non-Profit paid-up Policy offerable.	See 20.
23. When is Policy indisputable?	Aft. 5 yrs., if age admit.	
24. What, besides non-payment, voids Policy?		
25. Claim paid after Death and Title proved, ..	One month.	Immediately.
26. Invested on Mortgage,	£438,608.	£1,535,442.
27. Invested in Government Stock,	10,220.	Nil.
28. Invested in Loans on Rates, and on Lands and Houses and Ground Rents, ..	151,232.	1,094,047.
29. Proportion of Funds invested otherwise, ..	444,747.	805,107.
30. Limits of Voyage and Residence allowed without Licence from the Society, ..	Europe, Cols. of Brit. N. Amer., U.S.A. N. of 33° N. L., S. Amer. S. of 30° S. L. (ex. Gold Digs.), Cape, Natal, Australia S. of 30° S. L., New Zealand, Tasmania.	Europe, N. America N. of 30° N. L., Holy Land, Madeira, Algeria, Asia Minor, Egypt, Japan, New Zealand, Tasmania, and parts Australia, S. Africa S. of 25° S. L.
31. Table on which Valuations made and rate of interest per cent., ..	H.M. for Assurs. Gov. 1860 for Anns. 3½ p. c. for Assurs.; 4 for Anns.	For profit Policies specially derived from Carlisle at 3 per cent. Interest, with p. c. addition. For other classes and Anns. Carlisle, 3 per cent.
32. Head Office in	London.	London.
33. Chairman,	John Rutz.	The Very Rev. the Dean of Westminster.
34. Principal Officer,	Edwin Bowley, Secy.	Matthew Hodgson.

* For further information as to Offices marked *, see Appendix.

II. MUTUAL OFFICES.

economic.	Equitable.	Friends' Provident.	Hand-in-Hand.*
1823. Life. £3,619,661. December 1883. 1844. 1863. December 1884. December 1883. December 1888. Five years. With participa- from com- t. of Policy. Reduction of ium for life or years, or Cash. 30. ndar months. ed by Directors, 3 annual pay- 3, Surrender , if £50, is cable for Paid- dlicity. by suicide or e, but open to tors' considera- Third parties cted. mediately. 170. 71. 14. 82. N. of 33° N. L., h N. America, uda, Asia ; Algeria, Holy and Egypt, al., Tasmania, Zealand, Cape, , Madeira, &c. Table founded Carlisle, John son's Govern- ities, 1825, and able Exp. by m. Interest 3½ ent., with ad- ent. London. ry Barnett. sher, <i>Actuary</i> .	1762. Life. £4,168,155. 31st December 1881. £4,257,613. 63,284. 31st December 1884. 31st December 1879. 31st December 1889. Ten years. Six. Bonus, Cash, and Re- duction or Extinc- tion of Annual Pre- miums. 30. Policies on applica- tion converted into Free Paid-up Poli- cies for reduced amount. £2,980,704. 263,350. 239,290. 837,643. N. of 33° N. L. or S. of 30° S. L., African Coast of Meditern., Egypt, Holy Land, Madeira, Canaries, British Colonies in South Africa (ex- cept Mauritius), and Australian Colonies. Northampton Table, 3 per cent. interest. London. Sir Frederick Pollock, Bart. J.W. Stephenson, <i>Acty</i> .	1832. Life. £1,622,908. 20th of 11th Month, 1882. £1,735,635. 13,662. 20th of 11th Month, 1885. 20th of 11th Month, 1882. 20th of 11th Month, 1887. Five years. One. Bonus, Reduction of Premium, or Cash. One calendar month. Twelve months. Small fine. Surrender Value appli- cable for a Paid-up Policy. Ten days. £786,428. Nil. 764,699. 198,170. Anywhere N. of 35° N. L. or S. of 27° S. L. (except Asia and South America), or in British Colonies in South Africa, or Australia N. of 27° S. L. Special Table from Exp. of Society of Friends, 1811-1831, less on average than 1 per cent. under Carlisle and Govern- ment Medium. 3 per cent. Bradford. Frederick Priestman. Joseph John Dymond.	1696, Fire. 1836, Life. Fire and Life. Inc. F. F. £2,000,162. 31st December 1881. £2,124,565. Inc. F. F. 23,325. 31st December 1884. 31st December 1885. 31st December 1886. Year. Five. Reduction of Pre- mium, or, if special application made, Bonus. 30. 12 calendar months. 1s. per month for 3 months. After, at discretion. Surrender Value appli- cable for Paid-up Policy. Death by suicide or justice in 5 years Third part. protect. Prem. with interest returned if not ex- ceeding sum insured. One calendar month. £1,241,413. 571. 55,972. 882,754. Anywhere N. of 33° N. L. and S. of 30° S. L., Egypt to 1st Cataract, Holy Land, Madeira, Canaries, Cape, Natal, Tas- mania, and Austral- ian Colonies. HM. for Pol. Davies' Equitable for Annui- ties. Interest 4 per cent. Policies, 3 per cent. Annuities. London. John R. Elliot (by rotation). Benj. Blenkinsop.

* For further information as to Offices marked *, see Appendix.

II. MUTUAL OFFICES.

PARTICULARS OF INFORMATION.	London Life.	Marine and Gen
1. When Instituted,	1806.	1852.
2. Fire, Life, Accident, Guarantee, or Marine, ..	Life.	Life.
5. Amount of Life and Annuity Funds, as in ..	£3,679,264.	£394
Board of Trade Returns, published 1883, ..	30th June 1882.	31st December 18
6. Date to which Account brought down, ..	£3,870,101.	£440,238.
7. Amount of Funds as at latest date, ..	57,166.	3,018.
8. Amount of other liabilities,	30th June 1885.	31st December 18
10. Date to which latest Amount brought down, ..	30th June 1886.	31st December 18
11. Date of last Division of Profits,	30th June 1887.	31st December 18
12. Next Division of Profits takes place on ..	Year.	Five years.
13. Period of Division once in every	Eight.	Three.
15. Number of Payments entitling to Profits, ..	Reduction of Premium.	Bonus, Cash, R
17. Profits applied by way of	Then added to Policy	tion of Premiu
	after extinction.	extinguish Pr
19. Days of Grace,	15.	life.
20. Time allowed thereafter if fine paid,	22, 29, 36 days, and 3	30.
21. Fine p. cent. for such on Sum Assured, with ..	months.	12 calendar mor
also certificate of good health,	2s. 6d., 5s., and 7s. 6d.,	Compliance with
22. Conditions on which Policies not included ..	and 10s.	ditions the ca
in above are revived,		quires.
23. When is Policy indisputable?		Free or Paid-up
		cies granted
		able to Surr
		Values.
24. What, besides non-payment, voids Policy?	Untrue averment in	Death by suicid
	Proposal. Death by	justice, but
	suicide or justice be	parties protect
	fore Policy in force	
	for 3 years.	
25. Claim paid after Death and Title proved, ..	Three calendar months.	Immediately
26. Invested on Mortgage,	£1,395,322.	£44,587.
27. Invested in Government Stock,	221,012.	13,685.
28. Invested in Loans on Rates, and on Lands ..	1,880,940.	NIL
and Houses and Ground Rents,	429,993.	384,984.
29. Proportion of Funds invested otherwise, ..	Australia, Canaries,	Europe, Americ
30. Limits of Voyage and Residence allowed ..	Egypt N. of 1st Cat-	of 33° N. L. a
without Licence from the Society,	aract, Europe, Holy	of 30° S. L., A
	Land, Madeira, Natal,	N. of 30° N. L.,
	Japan, and N. of 33°	Land, Aust
	N. L. and S. of 31°	Colonies, Ma
	S. L.	Canaries, Cape
31. Table on which Valuations made and rate ..	Table giving Mean	
of interest per cent.,	Mortality of Equit-	
	able (Morgan), and	
	Government Male	
	Annuities (1829).	
	Interest, 4 per cent.	
	Members' Policies.	
	3½ per cent. others.	
32. Head Office in	London.	London.
33. Chairman,	John Costeker, <i>Presid.</i>	Henry Bayle
34. Principal Officer,	Edward Docker.	Claud G. Lah

* For further information as to Offices marked *, see Appendix.

**GENERAL DIRECTORY OF LIFE ASSURANCE OFFICES.
II. MUTUAL OFFICES.**

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Metropolitan.	Mutual.*	National Life.	National Provident.*
<p align="center">1885. Life.</p> <p align="center">£1,672,413. 4th January 1882. £1,795,274. 5,230.</p> <p>31st December 1885. 31st December 1885. 31st December 1886. Year. Five.</p> <p>Reduction of Premium. Division commencing (Reduction) for year from 5th April.</p> <p align="center">30. 12 calendar months.</p> <p>For 2 calend. months, 2s. For each calend. month after, 1s. No certificate.</p> <p>If for 5 years non- payment, only with consent of Directors, with certificate.</p> <p>Suicide, if before 2nd year's Premium or part thereof paid, but third parties protected. Immediately. £308,450. 60,000.</p> <p>1,113,737. 318,317.</p> <p>Europe, Egypt, Holy Land, Cape, Natal, Australian Colonies, and any part other than between 33° N. L. and 31° S. L., Malta, &c.</p> <p>HM., 4 per cent.</p> <p align="center">London, George E. Burnett (in rotation). Arthur Pearson.</p>	<p align="center">1884. Life.</p> <p align="center">£1,056,600. 31st December 1881. £1,116,565. 18,971.</p> <p>31st December 1884. 31st December 1885. 31st December 1886. Year. Two.</p> <p>Provisional Bonus as- certained yearly, and after 8 years, if de- sired, applied in Re- duction of Premium. 30. Twelve months.</p> <p>Regulated by time from lapse.</p> <p>After 3 Premiums paid, Paid-up Policy issu- able for £50 and up- wards.</p> <p>After 5 years and age 30 attained, Policy is free from all restric- tion and indisputable.</p> <p>Death by suicide or justice during first 5 years.</p> <p align="center">Immediately. £597,122. 22,850.</p> <p>325,062. 190,502.</p> <p>Europe, Australia, N. Zealand, Canada, U.S.A., with excep- tions, Cape.</p> <p>HM., 4 per cent.</p> <p align="center">London. Chas. John Todd, <i>pro</i> <i>tem</i>. Henry Manly, <i>Actuary</i>.</p>	<p align="center">1880. Life.</p> <p align="center">£797,172. 31st December 1881. £836,416. 11,258.</p> <p>31st December 1884. 31st December 1884. 31st December 1888. Four years. Six.</p> <p>Reduction of Pre- mium or Bonus for Class A, and special arrangements for other 3 Classes. One calendar month. Five, three, &c., up to twelve months. 2s. 6d., 5s., and 10s.</p> <p>Special arrangements for Policies having Sur. Value equal to 1 year's Premium.</p> <p>Death by suicide or justice. After 6 months from date of Policy, third parties interests protected. Thirty days. £637,274. 16,869.</p> <p>49,612. 143,914.</p> <p>Europe, part Egypt and Holy Land, Nov. to April inclusive, Malta, Madeira, Can- aries, &c., as in Prosp., pages 8 and 9.</p> <p>For Assurances, HM. and other Tables. For Annuities, Go- vernment (1875). Interest for Assur., 3½ and 2½. For An- nuities, 3 per cent.</p> <p align="center">London. John Nicholas, <i>Pre-</i> <i>sident</i>. Henry John Puckle.</p>	<p align="center">1885. Life.</p> <p align="center">£3,871,190. 20th November 1881. £4,143,695. 108,278.</p> <p>20th November 1884. 20th November 1882. 20th November 1887. Five years. One.</p> <p>Cash, Bonus, Reduc- tion of Prem., and, on extinction, Cash, Bonus, or Annuities granted. 30. Twelve months.</p> <p>1s. and 2s. according to time.</p> <p>Paid-up Profit Policies granted in lieu of others.</p> <p>Death by suicide within 4 years after Assurance. Third parties interests pro- tected. Immediately. £2,352,843. Nil.</p> <p>1,029,692. 869,438.</p> <p>Europe, Canada, or U.S.A. N. of 30° N. L., New Zealand, Australia, Cape and Natal, Egypt and Algiers, with excep- tions.</p> <p>For ordinary Assur- ances Table agreeing with published Rates. For others, Davies' Equitable, and Soc. of Friends' Table of Mortality.</p> <p align="center">London. John Scott (in rotation). Arthur Smither, <i>Acty.</i></p>

* For further information as to Offices marked *, see Appendix.

GENERAL DIRECTORY OF LIFE ASSURANCE OFFICES II. MUTUAL OFFICES.

PARTICULARS OF INFORMATION.	Norwich Union Life.	Provident
1. When Instituted,	1808.	184
2. Fire, Life, Accident, Guarantee, or Marine, ..	Life.	Life, Guara Accid
5. Amount of Life and Annuity Funds, as in Board of Trade Returns, published 1883, ..	£1,893,252.	£
6. Date to which Account brought down, ..	31st December 1881.	31st Decemb
7. Amount of Funds as at latest date, ..	£1,906,168.	£1,234,231.
8. Amount of other liabilities, ..	57,833.	11,332.
10. Date to which latest Amount brought down, ..	31st December 1885.	31st Decemb
11. Date of last Division of Profits, ..	30th June 1886.	31st Decemb
12. Next Division of Profits takes place on ..	30th June 1891.	31st Decemb
13. Period of Division once in every ..	Five years.	Five y
15. Number of Payments entitling to Profits, ..	1 to 5, according to time to Division.	3, and the pation fr mencemer
17. Profits applied by way of	Bonus in Old Series. Bonus Cash, or Re- duction from en- trance, to extinguish in life. After extinc- tion, further addi- tions made.	Bonus, Red Premium, conversion dowment.
19. Days of Grace,	30.	Calendar
20. Time allowed thereafter if fine paid, ..	12 calendar months.	3 calendar n mos., and
21. Fine p. cent. for such on sum Assured, with also certificate of good health, ..	Small fine.	5 per cent cen
22. Conditions on which Policies not included in above are revived, ..	Paid-up Non-Profit Pol- icy, equivalent to Surrender Value, ob- tainable.	Where Polic of four cla yrs. old, F on conditi
23. When is Policy indisputable?		
24. What, besides non-payment, voids Policy?	Death by suicide or justice in 3 years from issue, but third parties' interests protected.	Death by ju suicide, if case, withi from Poli but third protected.
25. Claim paid after Death and Title proved, ..	Three months.	One mo
26. Invested on Mortgage,	£1,293,140.	£334,094.
27. Invested in Government Stock,	299,809.	Nil
28. Invested in Loans on Rates, and on Lands and Houses and Ground Rents, ..	123,876.	294,386.
29. Proportion of Funds invested otherwise, ..	247,176.	617,083.
30. Limits of Voyage and Residence allowed without Licence from the Society, ..	Europe, Egypt N. of 2nd Cataract, Holy Land, Malta, Madeira, Canaries, Natal, Cape, Aus- tralian Colonies, S. of 25° S. L. and (except Asia) N. of 83° N. L. or S. of 30° S. L. (ex. Military, &c.).	Europe, Brit American Cape, New and withi limits in and U. S. Madeira ar
31. Table on which Valuations made and rate of interest per cent.,	H.M. for Assur. H.M. (5) for conversion into Bonus. Annu- ties, Govern. Male and Female, 1860. 3½ p. c. throughout.	Carlisle, 3 1
32. Head Office in	Norwich and London.	Lond
33. Chairman,	Arthur Preston, Pres.	Edward C
34. Principal Officer,	T. Muir Grant, Sec.	John Edwar

**GENERAL DIRECTORY OF LIFE ASSURANCE OFFICES.
II. MUTUAL OFFICES.**

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Reliance.	Scottish Amicable.*	Scottish Equitable.	Scottish Provident.*
1840. Life.	1826. Life.	1831. Life.	1837. Life.
£536,410. 31st December 1881. £207,004. 7,497. 31st December 1884. 31st December 1882. 31st December 1887. Five years. Three.	£2,306,721. 31st December 1881. £2,662,968. 51,507. 31st December 1885. 31st December 1881. 31st December 1888. Seven years. Six.	£2,544,899. 1st March 1882. £2,821,174. 87,413. 1st March 1885. 1st March 1883. 1st March 1888. Five years. Six.	£4,109,537. 31st December 1881. £5,063,834. 75,840. 31st December 1884. 31st December 1880. 31st December 1887. Seven years. When Premiums at 4 p. ct. comp. interest, equal Sum Assured. Bonus, after 3 years, Surrender Value receivable, or Paid-up Policy equivalent, if for not less than £50.
Bonus, Reduction of Premium, or making Policy payable at fixed age.	Bonus, Cash, Reduction of Premium for life or period of years.	Bonus, Cash, Reduction of Premium for life or 5 years.	Bonus, after 3 years, Surrender Value receivable, or Paid-up Policy equivalent, if for not less than £50.
30. One year.	21. Thirteen months.	30. Till next Premium due.	One calendar month. Twelve months.
Not exceeding 1 per cent. In Whole Life and Endowment, and 3 years Premiums paid, Free Profit Policy issued. No Pol. void by unintentional error in Prop. Death by suicide or justice, but after 5 years' Premiums sum Assured allowed to repres. Third parties protected. Prems., if less than 5, refunded. Three months.	Moderate fine. Paid-up Policies equivalent to Surrender Value are granted at any time.	2½ per cent. per month on Premium. Surrender Value applicable to keep Policy in force, under Non-Forfeiture Scheme.	Moderate fine, without certificate. Surrender Value retained for 5 years, applic. to Paid-up Policies, if option made in 1 mo.
£243,931. 22,886.	Immediately. £907,205. NIL.	Three months. £1,729,307. 76,975.	One month. £3,554,582. NIL.
35,046. 312,638. Europe, Azores, Madeira, British N. American Colonies, U. S. A. N. of 33° N. L., Cape, Natal, Australia S. of 20° S. L., New Zeal., Tasmania, and S. America S. of 30° S. L. (except Gold Diggings). H.M. for Assurances. Government (1860) for Annuities. 4 per cent.	572,562. 1,224,708. Voyage anywhere in 1st Cl. Steam Vessel. After 5 years' residence in home limits, allowed to reside anywhere, except Naval, &c.	379,982. 722,323. For persons assured with Society, Europe, America N. of 33° N. L. and anywhere S. of 30° S. L., except Seafaring. Special cases and extra risks fixed by Directors.	223,511. 1,861,581. For Members (except Military, &c.), anywhere (except Asia) N. of 35° N. L. and S. of 30° S. L. After 5 years and 30 attained and limits not passed, Surrender Value Policies (generally) Free.
W. W. Duffield (by rot.). Henry Unwin.	English Life, No. 1, Males. For Joint, Carlisle. For Bonus, Northampton. 4 per cent. Glasgow. Elias Gibb (by rotation). Thomas Marr.	Carlisle, 3 per cent. Edinburgh. Jas. Muirhead (in rota.). Thomas Bond Sprague.	H.M. for Ordin. Assurs. Endow. or Conting., Carlisle or Government Male Annuity-tants. Annuities by Office Tables. 4 p. ct. Edinburgh. G. M. Frazer-Tyler (in rotation). James Watson, Man.

* For further information as to offices marked *, see Appendix.

II. MUTUAL OFFICES.

PARTICULARS OF INFORMATION.	Scottish Widows' Fund.*	United Kingdom Temperance & General.
1. When Instituted,	1815.	1840.
2. Fire, Life, Accident, Guarantee, or Marine, ..	Life only.	Life.
5. Amount of Life and Annuity Funds, as in Board of Trade Returns, published 1883, ..	£7,667,443.	£3,020,942.
6. Date to which Account brought down, ..	31st December 1881.	31st December 1881.
7. Amount of Funds as at latest date, ..	£3,919,334.	£3,817,338.
8. Amount of other liabilities, ..	209,459.	50,220.
10. Date to which latest Amount brought down, ..	31st December 1885.	31st December 1885.
11. Date of last Division of Profits, ..	31st December 1880.	31st December 1885.
12. Next Division of Profits takes place on ..	31st December 1887.	31st December 1890.
13. Period of Division once in every ..	Seven years.	Five years.
15. Number of Payments entitling to Profits, ..	Six.	One.
17. Profits applied by way of	Bonus, Reduction of Premium, or Cash, if Members for 5 years. Others, Bonus.	Whole Life, Endow- ment, or Joint Lives: Bonus, Reduction of Premium, or Cash. Under Credit, Bonus.
19. Days of Grace,	30.	One calendar month.
20. Time allowed thereafter if fine paid, ..	12 months, if Surrender Value equal to Pre- mium due.	Twelve months.
21. Fine p. cent. for such on Sum Assured, with also certificate of good health, ..	Small fine. If Sur. Value not equal to Premium, Certificate may be required.	No fine, but interest payable on arrear of Premiums.
22. Conditions on which Policies not included in above are revived, ..	All Policies (except Partial Periods or Ascending Scale) en- titled to Paid-up Policies.	Where 3 years' Pre- miums paid, equiva- lent Paid-up Policy granted, if Sur. Value £50 or more.
23. When is Policy indisputable?	After 5 years, if age and accuracy of Pro- posal admitted.	Policies indisputable, except fraud.
24. What, besides non-payment, voids Policy?	Suicide in 5 years, but Directors empowered to pay whole or part of Policy. Third parties protected.	Suicide, if in 12 months from Policy being in force.
25. Claim paid after Death and Title proved, ..	Three months.	Seven days.
26. Invested on Mortgage,	£6,735,708.	£1,225,873.
27. Invested in Government Stock,	Nil.	19,929.
28. Invested in Loans on Rates, and on Lands and Houses and Ground Rents,	750,484.	1,598,763.
29. Proportion of Funds invested otherwise, ..	1,642,601.	1,022,993.
30. Limits of Voyage and Residence allowed without Licence from the Society, ..	Europe, Malta, Egypt, Holy Land, Madeira, Canaries, Cape, Natal, Australian Cols., and, exc. Asia, N. of 33° N. L. or S. of 30° S. L., exc. Mili- tary, &c	No extra Premium re- quired.
31. Table on which Valuations made and rate of interest per cent.,	H.M. (5) for Assurances of 5 years and up- wards. H.M. for As- surances under 5 years. 3½ per cent.	H.M. for Assurances and Endowments, but if Assurances of 5 yrs. standing, H.M. (5) by adjustment. 3 p. c.
32. Head Office in	Edinburgh.	London.
33. Chairman,	Sir John Gillespie (in rotation).	Robert Warner.
34. Principal Officer,	Aw. H. Turnbull.	Thomas Cash.

* For further information as to Offices marked *, see Appendix.

GENERAL DIRECTORY
OF
LIFE ASSURANCE OFFICES—*Continued.*

**III. COLONIAL and AMERICAN OFFICES transacting
Business in Great Britain and Ireland.**

III.—COLONIAL AND AMERICAN OFFICES

PARTICULARS OF INFORMATION.	The Colonial Mutual.*	Equitable of the United States:
1. When instituted,	1873.	1859.
2. Fire, Life, Accident, Guarantee, or Marine,	Life.	Life.
4. Amount of Capital paid-up and Invested,		£20,833.
5. Amount of Life and Annuity Funds, as in Board of Trade Returns, published 1883,	At Mar. 1885, £471,353.	£9,176,330.
6. Date to which Account brought down, ..	£566,074, as at March 1886.	31st December 1881.
7. Amount of Funds as at latest date, ..	7,173.	£12,057,076.
8. Amount of other liabilities,		33,559.
10. Date to which latest Amount brought down,		31st December 1884.
11. Date of last Division of Profits,	31st March 1884.	31st December 1886.
12. Next Division of Profits takes place on ..	31st March 1889.	31st December 1887.
13. Period of Division once in every	Five years.	Year.
15. Number of Payments entitling to Profits,	The whole.	One.
16. Proportion of Profits given to the Assured,	Bonus, Reduction of Premium for Life or 5 years, or make payable in Life, Cash.	Whole Profits. Bonus, Reduction of Premium.
17. Profits applied by way of		
18. Last Dividend to Shareholders, rate p. ct.,		5 per cent.
19. Days of Grace,	One calendar month.	No grace allowed.
20. Time allowed thereafter if fine paid, ..		Six per cent. on Premiums.
21. Fine p. cent. for such on sum Assured, with also certificate of good health,		
22. Conditions on which Policies not included in above are revived,	Surrender Value, if any, is applied to keep up Policy for equivalent time.	
23. When is Policy indisputable?	From inception, unless previous fraud.	After 3 years.
24. What besides non-payment, voids Policy?	Nothing but fraud at inception.	
25. Claim paid after Death and Title proved,	Immediately.	Immediately.
26. Invested on Mortgage,	£213,803.	£3,228,068.
27. Invested in Government Stock,	NIL.	132,604 United States Bonds.
28. Invested in Loans on Rates, and on Lands and Houses and Ground Rents,	202,156.	2,227,551.
29. Proportion of Funds invested otherwise, ..	152,288.	6,528,845.
30. Limits of Voyage and Residence allowed without Licence from the Society,	Anywhere from inception, if on declaration Assurer states he has no intention to go abroad. Limits ascertained by enquiring at office.	In Free Tontine Poly., anywhere, after Pol. is in force for one year.
31. Table on which Valuations made and rate of interest per cent.,	H.M. and H.M. (5) at 4 per cent.	American Experience. 4½ p. c. Valuation made by Insurance Depart., State of N. York.
32. Head Office in	Australia, Victoria, Melbourne.	New York.
33. Chairman,	Rev. H. Plow Kane.	L. Fitzgerald (in rota.)
34. Principal Officer,	T. Jacques Martin.	H. B. Hyde, President.

* For further information as to offices marked *, see Appendix.

SACCTING BUSINESS IN GREAT BRITAIN.

York Life, Mutual.*	The Mutual Life Insurance Company of New York.*
1845. Life.	1842. Life only. None. At 31st December 1886, £23,787,909.
£9,593,945. ember 1881. 558.	None. 31st December 1886. 31st December 1886. 31st December 1887. Year. One. The whole. Reversion (Bonus) or Cash.
1745. ember 1884. ember 1886. ember 1887. Year. Two. e whole. or Cash avail- pay Premium.	Thirty days. After 3 years, "Full Surrender" for the amount required by the Pro- visions of the Act 21st May 1879, Laws of the State of New York, upon legal Surrender of Policy before default in payment of any Premium or within 6 months thereafter. After two years.
e month. rther month. er annum on Certificate, if red by Med. of Company. es now issued, 3 full years, up Non-Profit issued.	Immediately. £10,441,447. 8,764,925 United States Bonds.
ity days. 14. 16 United States Bonds.	2,206,517.
108 State of New ork Bonds, &c. 8 Bonds, &c., other States. 38 Lands and Houses, &c. 19 invested otherwise. re on notice to except within ropics and in es held by Coy. unhealthy. 1 application.	2,375,020.
n Experience, c. Valuation by Insurance State of N.	World wide after two years. Permit required for the TORRID ZONE during first two years only. American Experience, 4 per cent. Valuation made by Insurance Department, State of New York.
w York.	New York, Nassau, Cedar and Liberty Streets.
ins, and others. lin, President.	Trustees in rotation. Richard A. M'Curdy—see p. 295 (Advertisement).

* For further information as to offices marked *, see Appendix.

T A B L E S

**SHOWING THE RATES OF THE DIFFERENT OFFICES,
ARRANGED, AS IN THE PRECEDING TABLES,**

AS

**MIXED, MUTUAL, AND COLONIAL AND
AMERICAN OFFICES.**

RATES OF MIXED OFFICES.

OFFICES.	ANNUAL PREMIUM CHARGED FOR THE ASSURANCE OF £100 FOR THE WHOLE PERIOD OF LIFE AT THE AGES OF										
	15	20	25	30	35	40	45	50	55	60	
Alliance, .	£ s. d. 1 12 8	£ s. d. 1 16 11	£ s. d. 2 2 6	£ s. d. 2 9 2	£ s. d. 2 16 8	£ s. d. 3 6 6	£ s. d. 3 17 8	£ s. d. 4 14 2	£ s. d. 5 19 11	£ s. d. 7 14 11	With four-fifths profits from whole Life business.
"	1 8 5	1 12 7	1 16 6	2 1 8	2 8 1	2 16 4	3 7 5	4 2 0	5 1 8	6 8 8	Without profits.
Atlas, .	1 17 7	2 2 1	2 4 8	2 9 3	2 15 5	3 3 7	3 14 6	4 8 8	5 8 0	6 14 3	With whole profits of Life department less expenses.
"	1 10 1	1 14 5	1 17 0	2 1 5	2 7 5	2 15 5	3 6 0	3 19 9	4 18 7	6 4 2	Without profits.
British Equitable, .	...	1 18 1	2 3 0	2 9 0	2 16 6	3 6 0	3 18 2	4 14 3	5 16 4	7 7 2	With whole profits of Mutual department, less expenses.
"	...	1 15 3	1 19 9	2 5 4	2 12 4	3 1 1	3 12 4	4 7 3	5 7 9	6 16 3	Without profits.
Caledonian, .	...	1 19 5	2 3 6	2 8 9	2 15 6	3 4 6	3 14 6	4 8 6	5 9 6	6 15 9	With five-sixths profits.
"	...	1 13 7	1 16 8	2 1 4	2 7 8	2 16 0	3 6 9	4 0 9	4 19 8	6 5 3	Without profits.
Church of England, .	...	1 17 4	2 1 6	2 6 10	2 13 11	3 3 6	3 15 10	4 11 11	5 13 2	7 1 2	With whole profits of Mutual branch.
"	...	1 13 11	1 17 9	2 2 7	2 9 1	2 17 8	3 8 11	4 3 6	5 2 11	6 8 4	Without profits.
City of Glasgow, .	1 12 11	1 17 0	2 2 3	2 8 5	2 15 5	3 4 6	3 14 10	4 9 10	5 12 9	6 16 4	Not stated, but at last division was 86 per cent. of whole profits.
"	1 9 6	1 12 0	1 16 0	2 1 6	2 6 6	2 14 6	3 5 6	4 1 0	5 0 6	6 6 0	Without profits.
Clerical, Medical, and General, .	1 13 3	1 17 3	2 2 6	2 8 9	2 15 9	3 5 0	3 15 6	4 10 9	5 13 9	7 4 9	With five-sixths of whole profits.
"	1 8 6	1 12 0	1 16 6	2 2 0	2 8 0	2 15 9	3 4 9	3 17 9	4 17 9	6 4 6	Without profits.
Commercial Union, .	1 15 0	1 18 10	2 3 8	2 9 7	2 15 9	3 4 2	3 13 10	4 7 8	5 9 2	6 17 8	With four-fifths of net profits of Life branch.
"	1 10 6	1 14 0	1 18 5	2 3 5	2 9 6	2 17 2	3 6 0	3 18 9	4 18 0	6 4 4	Without profits.

	.	1	14	10	1	19	4	2	3	8	2	9	3	2	16	3	3	5	1	3	16	10	4	12	5	13	3	1	11	100 per cent. of whole profits. Without profits.			
Crown,	1	14	10	1	17	6	2	2	0	2	2	0	2	16	0	3	6	6	4	0	1	4	18	6	3	7	80 per cent. of whole profits. Without profits.			
"	1	14	10	1	17	6	2	2	0	2	2	0	2	16	0	3	6	6	4	0	1	4	18	6	3	7	80 per cent. of whole profits. Without profits.			
Eagle,	.	.	1	18	4	2	1	7	2	5	7	2	10	8	2	17	1	3	5	5	16	6	4	11	4	5	10	11	6	17	4	With four-fifths of whole profits.	
"	.	.	1	13	1	1	16	4	2	0	4	2	5	5	2	11	10	3	0	2	3	11	3	4	6	1	5	5	8	12	1	Without profits.	
Edinburgh,	.	.	1	13	1	1	17	4	2	2	0	2	7	2	14	6	3	3	2	3	14	2	4	9	0	5	9	1	6	15	8	With nine-tenths of profits from all sources.	
"	.	.	1	10	0	1	14	4	1	17	2	2	1	9	2	7	11	2	16	2	3	10	4	0	10	4	19	9	6	5	6	Without profits.	
English and Scottish Law,	1	17	8	2	2	9	2	8	2	8	2	15	6	3	4	6	3	15	6	4	10	0	5	10	8	6	16	6	Nine-tenths of profits from Life Assurance business.	
"	1	12	6	1	16	6	2	0	8	2	6	6	2	14	6	3	5	4	4	0	5	0	5	0	6	4	0	0	Without profits.	
Equity and Law	.	.	1	15	6	2	0	1	2	3	2	8	10	2	15	10	3	4	6	3	15	7	4	10	9	5	12	6	7	2	5	With nine-tenths of profits from every source.	
"	.	.	1	11	6	1	15	6	1	18	4	2	2	9	2	8	10	2	17	0	3	7	9	4	1	9	5	0	11	6	11	Without profits.	
General,	.	.	1	15	10	1	19	1	2	4	0	2	9	10	2	16	6	3	5	4	16	8	4	12	8	5	11	8	6	18	0	With four-fifths of profits on Participating Policies.	
"	.	.	1	10	6	1	13	8	1	18	0	2	3	4	2	9	6	2	17	9	3	0	4	4	6	5	4	10	6	10	4	Without profits.	
Gresham,	1	18	10	2	3	3	2	9	0	2	16	3	5	3	5	8	3	18	0	4	14	3	5	16	3	7	6	5	With four-fifths of whole profits made by Company.	
"	1	12	8	1	17	0	2	2	8	2	9	10	2	18	10	3	10	10	4	6	10	5	8	5	6	17	10	Without profits.		
Guardian,	.	.	1	17	6	2	1	6	2	5	4	2	10	4	2	16	7	3	4	6	3	15	2	4	9	3	5	8	4	6	14	6	With four-fifths of profits, except from Annuities and Endowments.
"	.	.	1	10	2	1	14	3	1	18	0	2	3	0	2	9	3	2	17	3	7	11	4	2	0	5	1	0	6	7	2	Without profits.	
Imperial Life,	.	.	1	17	4	2	0	10	2	5	0	2	10	3	2	16	8	3	4	11	3	15	11	4	10	2	5	9	1	6	16	0	With four-fifths of whole profits of business.
"	.	.	1	10	0	1	13	2	1	16	11	2	2	1	2	8	1	2	15	9	3	6	8	19	4	4	18	1	6	5	0	Without profits.	
Lancashire,	1	17	0	2	3	0	2	8	6	2	15	0	3	3	6	3	15	0	4	10	6	5	9	6	...	...	...	...	With four-fifths of whole profits from Life business.	
"	1	13	10	1	17	7	2	2	6	2	8	6	2	16	9	3	7	6	4	2	6	5	0	1	...	...	...	...	Without profits.	
Law Life,	.	.	1	14	8	1	19	3	2	3	8	2	9	4	2	16	2	3	4	10	3	16	3	4	11	0	5	10	9	6	17	6	With four-fifths of entire amount of profits.
"	.	.	1	10	6	1	14	8	1	18	9	2	4	0	2	10	5	2	18	6	3	9	2	4	3	1	5	1	9	6	7	2	Without profits.
Law Union,	.	.	1	14	2	1	18	8	2	3	7	2	9	4	2	16	7	3	5	3	17	0	4	12	0	5	12	8	7	1	5	With whole profits, less 5 per cent. on premiums.	
"	.	.	1	10	6	1	14	7	1	19	0	2	4	5	2	11	2	2	19	5	3	10	5	4	11	5	4	9	6	12	6	Without profits.	

Note.—Women are, in general, charged, if between 15 and 50 years of age, Five Shillings per cent. in addition to above Rates.

RATES OF MIXED OFFICES.

OFFICES.	ANNUAL PREMIUM CHARGED FOR THE ASSURANCE OF £100 FOR THE WHOLE PERIOD OF LIFE AT THE AGES OF										
	15	20	25	30	35	40	45	50	55	60	
	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	
Legal and General,	1 16 2	2 0 4	2 5 1	2 10 9	2 17 7	3 5 11	3 16 7	4 10 9	5 11 6	6 19 5	With nine-tenths of total profits.
"	1 9 10	1 13 8	1 17 7	2 2 0	2 8 0	2 16 0	3 6 7	4 0 4	4 19 2	6 4 8	Without profits.
Life Association of Scotland,	...	1 18 8	2 4 0	2 10 0	2 17 0	3 5 4	3 17 4	4 13 4	5 14 8	7 3 4	With profits. See General Directory under this head.
"	...	...	1 16 6	2 1 5	2 6 6	2 14 3	3 5 8	4 0 8	5 1 0	6 8 8	Without profits.
Liverpool and Lon- don and Globe,	1 13 6	1 17 8	2 2 11	2 9 3	2 16 3	3 5 6	3 16 0	4 11 3	5 14 8	7 5 11	With four-fifths profits of class.
"	1 8 2	1 12 5	1 16 6	2 1 8	2 8 1	2 16 1	3 6 2	3 19 6	4 18 3	6 3 4	Without profits.
London Assurance,	1 15 1	1 19 10	2 4 0	2 9 6	2 16 3	3 4 11	3 16 5	4 11 5	5 11 5	7 2 11	With two-thirds of profits of class.
"	1 8 1	1 13 2	1 18 1	2 4 6	2 10 10	2 18 9	3 9 5	4 3 4	5 1 11	6 10 8	Without profits.
London and Lancas- shire,	1 11 10	1 15 10	2 0 10	2 6 10	2 13 7	3 2 4	3 12 5	4 6 10	5 9 1	6 18 11	With four-fifths of entire net profits.
"	1 9 2	1 12 10	1 17 5	2 2 11	2 9 1	2 17 2	3 6 5	3 19 8	5 0 6	7 5	Without profits.
Midland Counties,	1 17 3	2 1 6	2 4 10	2 9 11	2 16 2	3 4 8	3 15 0	4 9 6	5 7 11	6 13 10	With four-fifths profits.
"	1 13 1	1 17 4	2 0 7	2 5 9	2 11 11	3 0 5	3 10 9	4 5 3	5 3 8	6 9 8	Without profits.
National of Ireland,	1 14 5	1 18 10	2 3 1	2 8 7	2 15 5	3 4 3	3 16 0	4 11 7	5 12 9	7 1 8	With two-thirds profits.
"	1 8 0	1 12 3	1 16 1	2 1 4	2 7 9	2 16 0	3 7 0	4 1 8	5 1 4	6 8 6	Without profits.
North British and Mercantile,	1 13 11	1 18 2	2 3 5	2 9 10	2 17 0	3 6 1	3 16 7	4 11 11	5 11 2	6 16 2	With nine-tenths profits of Life branch.
"	1 9 3	1 12 11	1 17 6	2 3 0	2 9 2	2 17 3	3 6 5	3 19 9	5 0 0	6 3 1	Without profits.
Northern,	1 13 8	1 18 4	2 2 10	2 8 8	2 15 10	3 4 10	3 16 9	4 12 4	5 13 2	7 1 6	With whole profits of class, less ex- pense of management.
"	1 8 8	1 12 11	1 16 11	2 2 3	2 8 10	2 17 3	3 8 6	4 3 5	5 3 7	6 11 3	Without profits.

RATES OF MIXED OFFICES.

OFFICES.		ANNUAL PREMIUM CHARGED FOR THE ASSURANCE OF £100 FOR THE WHOLE PERIOD OF LIFE AT THE AGES										
		15	20	25	30	35	40	45	50	55	60	
Scottish Metropolitan,	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	When Prem. at 4 p. c. comp. int. amt. to sum assured, Policy will share in profits. Proportion not stated.
	1 13 8	1 14 9	1 16 10	2 0 8	2 6 7	2 14 7	3 5 4	3 19 7	4 19 0	6 6 1	No rates of premium without profits. Male Life. Prop. of profits given to Assured at last division, 92½ p. c.	
	1 12 8	1 17 5	2 2 0	2 7 11	2 15 4	3 4 8	3 16 5	4 11 8	5 12 2	7 0 0	Male Life. Without profits.	
	1 9 4	1 13 7	1 17 8	2 3 0	2 9 8	2 18 0	3 9 2	4 3 10	5 3 8	6 10 9	Female Life. Prop. of profits not stated. Presumed same as above.	
Scottish Temperance, Limited,	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	With four-fifths profits when Prem. at 4 p. c. comp. int. amt. to sum assured. No Premiums for whole life without profits.
	1 13 1	1 16 11	2 1 8	2 5 10	2 11 4	2 18 10	3 7 3	3 19 2	4 17 2	6 3 0	With nine-tenths of profits.	
	...	1 17 6	2 1 8	2 7 0	2 13 8	3 2 2	3 13 6	4 8 8	...	...	After Prem. at 4 p. c. comp. int. amt. to sum assured, 9-10ths of profits div. See General Directory, under "Standard," No. 15.
	1 18 0	2 3 3	2 10 0	2 17 0	3 5 0	3 15 0	4 10 0	5 11 0	7 0 0	0	Without profits.	
Scottish Union and National,	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	With four-fifths of profits.
	1 15 0	1 17 6	2 1 3	2 6 6	2 14 6	3 6 0	4 1 0	5 0 0	6 10 0	0	Without profits.	
	1 13 11	1 17 11	2 2 11	2 8 11	2 15 8	3 4 5	3 14 6	4 9 0	5 11 2	7 1 0	With four-fifths profits.	
	1 9 2	1 12 10	1 17 6	2 2 11	2 9 1	2 17 2	3 6 5	3 19 8	5 0 0	6 2 8	Without profits.	
Standard,	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	With nine-tenths profits.
	1 13 2	1 17 4	2 2 7	2 8 9	2 15 11	3 4 11	3 15 5	4 10 6	5 13 7	7 4 9	Without profits.	
	1 11 8	1 15 1	2 0 1	2 5 10	2 12 6	3 1 0	3 10 3	4 5 2	5 6 10	6 15 10	With four-fifths of profits.	
	1 12 8	1 16 11	2 2 6	2 9 2	2 16 8	3 6 6	3 17 8	4 14 2	5 19 11	7 14 11	Without profits.	
Sun,	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	With four-fifths profits.
	1 8 0	1 11 8	1 16 5	2 2 2	2 8 4	2 16 2	3 5 1	3 18 1	4 18 6	6 6 1	Without profits.	
	1 14 7	1 18 10	2 3 5	2 9 3	2 16 4	3 5 3	3 16 11	4 12 0	5 12 0	7 0 9	With four-fifths profits.	
	1 7 0	1 11 5	1 15 9	2 1 4	2 8 3	2 17 0	3 8 6	4 3 8	5 4 0	6 11 9	Without profits.	

Universal, .	1 15 0	1 18 8	2 3 3	2 3 3	2 8 10	2 14 11	3 3 0	3 12 2	4 5 6	5 5 10	6 13 2	With three-fourths profits.
"	1 11 6	1 14 10	1 19 0	2 4 0	2 9 6	2 16 9	3 5 0	3 17 0	4 15 3	5 19 11	6 19 11	Without profits.
"	...	3 4 0	3 10 0	3 16 0	4 6 0	4 14 0	5 6 0	5 18 0	7 0 0	8 6 0	9 8 6	Indian rates. With profits as above.
"	...	2 12 0	3 0 0	3 4 0	3 12 0	4 2 0	4 10 0	5 2 0	6 4 0	7 18 0	8 18 0	Indian rates. Without profits.
Universty, .	1 16 8	2 1 5	2 5 9	2 10 9	2 16 11	3 4 7	3 14 1	4 7 6	5 5 4	6 7 4	7 7 4	With nine-tenths profits.
"	1 5 4	1 9 8	1 13 5	1 17 11	2 3 0	2 9 10	3 0 6	3 13 0	4 7 6	5 10 3	6 10 3	Without profits.
Westminster and General, .	1 13 3	1 17 4	2 2 7	2 8 10	2 15 10	3 5 0	3 15 5	4 10 6	5 13 8	7 4 8	8 7 4	With four-fifths profits.
"	1 10 11	1 14 7	1 19 7	2 5 4	2 11 10	3 0 4	3 10 0	4 4 0	5 5 6	6 14 2	7 14 2	Without profits.
West of England, .	1 15 11	2 0 11	2 5 8	2 11 3	2 17 11	3 6 1	3 16 2	4 9 1	5 5 6	6 7 4	7 7 4	With 80 per cent. 1847 series, and 50 per cent. old series profits.
"	1 11 0	1 15 5	2 0 2	2 5 9	2 12 5	3 0 6	3 10 8	4 3 6	5 0 0	6 1 10	7 1 10	Without profits.
Whitlington, .	...	1 17 11	2 3 4	2 9 0	2 15 8	3 5 2	3 16 0	4 11 8	5 13 0	7 0 6	8 0 6	With four-fifths profits.
"	...	1 12 8	1 17 6	2 3 2	2 9 6	2 18 0	3 7 8	4 1 10	5 4 0	6 14 2	7 14 2	Without profits.
Yorkshire, .	...	1 18 6	2 3 7	2 9 7	2 16 3	3 5 0	3 14 10	4 9 1	5 10 10	7 0 0	8 0 0	With four-fifths profits.
"	...	1 11 5	1 15 9	2 1 4	2 8 3	2 17 0	3 7 6	4 0 5	5 0 6	6 7 2	7 7 2	Without profits.

Note.—Women are, in general, charged, if between 15 and 50 years of age, Five Shillings per cent. in addition to above Rates.

RATES OF MUTUAL OFFICES.

OFFICES.	ANNUAL PREMIUM CHARGED FOR THE ASSURANCE OF £100 FOR THE WHOLE PERIOD OF LIFE AT THE AGES OF											
	15	20	25	30	35	40	45	50	55	60		
British Empire,	£ s. d. 1 13 4	£ s. d. 1 17 6	£ s. d. 2 2 4	£ s. d. 2 8 3	£ s. d. 2 15 4	£ s. d. 3 4 2	£ s. d. 3 15 7	£ s. d. 4 11 1	£ s. d. 5 13 7	£ s. d. 7 4 0	With whole profits.	
"	1 9 2	1 13 0	1 17 2	2 2 6	2 8 6	2 16 3	3 6 4	3 19 7	4 17 5	6 2 6	With no profits.	
Clergy, .	1 11 0	1 15 0	2 0 2	2 6 4	2 13 0	3 2 2	3 12 4	4 7 4	5 10 4	7 1 6	With whole profits.	
Economic, .	1 10 8	1 14 7	1 19 0	2 4 3	2 10 11	2 19 9	3 11 9	4 7 6	5 4 8	6 7 5	With whole profits.	
"	1 7 7	1 11 2	1 15 1	1 19 9	2 5 11	2 13 10	3 4 8	3 19 1	4 17 4	6 1 1	With no profits.	
Equitable, .	1 18 7	2 3 7	2 8 1	2 13 5	2 19 10	3 7 11	3 17 11	4 10 8	5 6 4	6 7 4	With whole profits.	
Friends' Provident,	1 14 2	1 17 6	2 1 3	2 5 9	2 11 2	2 18 1	3 7 0	3 19 3	4 16 8	6 1 9	With whole profits.	
Hand-in-Hand,	1 13 10	1 19 2	2 4 2	2 10 8	2 18 9	3 8 10	4 2 2	4 19 3	6 1 6	7 10 7	With whole profits, on scale of series.	
"	1 12 0	1 12 0	1 16 6	2 1 4	2 7 10	2 16 0	3 6 9	4 0 9	5 0 0	6 6 0	With no profits.	
London Life,	2 4 0	2 9 0	2 13 6	2 19 3	3 7 0	3 17 0	4 9 9	5 7 6	6 9 6	7 15 0	With whole profits, on scale of series.	
"	1 9 10	1 13 7	1 17 0	2 1 5	2 7 6	2 15 5	3 6 0	4 1 2	5 1 0	6 5 10	With no profits.	
Marine and General,	1 13 7	1 18 1	2 3 1	2 8 10	2 16 4	3 5 11	3 17 7	4 11 11	5 12 5	7 0 0	With whole profits.	
"	1 12 0	1 13 0	1 15 6	2 0 0	2 6 0	2 14 0	3 4 8	3 18 6	4 17 9	6 4 0	With no profits.	
Metropolitan,	...	1 19 6	2 4 0	2 9 9	2 17 5	3 6 4	3 18 11	4 12 0	5 14 0	7 2 10	With whole profits.	
"	...	1 13 1	1 16 6	2 1 2	2 7 0	2 14 6	3 5 4	3 19 9	4 19 2	6 5 9	With no profits.	
Mutual, .	1 12 10	1 17 9	2 2 7	2 8 10	2 16 8	3 6 8	4 0 2	4 17 11	6 2 1	7 15 2	With whole profits.	
"	1 10 3	1 15 0	1 17 11	2 1 2	2 6 10	3 14 8	3 5 5	4 0 0	4 19 1	6 5 6	With no profits.	

NAME.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	With whole profits, in two classes.											
"	1	11	6	1	15	3	1	19	0	2	8	6	2	9	3	2	16	7	3	6	2	3	19	3	4	18	6	5	0	With no profits.		
National Provident,	1	15	2	1	19	4	2	4	3	2	10	2	2	17	5	3	6	3	17	4	4	11	1	5	8	6	11	10		With whole profits class by class.		
Norwich Union,	1	14	9	1	19	6	2	3	8	2	8	10	2	14	10	3	2	0	8	11	0	4	6	0	5	5	3	6	11	3	With whole profits of old series.	
"	1	19	4	2	2	8	2	6	8	2	11	9	2	18	2	3	6	3	17	7	4	12	5	5	12	6	7	2	0	With whole profits of new series.		
"	...	1	13	9	1	16	7	2	1	4	2	7	8	2	16	0	3	7	1	4	1	1	5	5	0	4	6	6	3		With no profits.	
Provident Clerks,	1	11	11	1	16	1	2	0	1	2	6	4	2	13	5	3	2	8	16	1	4	12	2	5	17	4	7	11	7		With whole profits.	
"	1	8	9	1	12	6	1	16	1	2	1	9	2	8	1	2	16	5	3	8	6	4	3	0	5	5	8	7	4	0	With no profits.	
Reliance,	1	13	1	1	17	7	2	3	11	2	9	4	2	16	9	3	5	10	3	18	0	4	14	2	5	13	8	6	18	6	With whole profits.	
"	1	9	10	1	14	0	1	18	9	2	4	6	2	11	3	2	19	6	3	10	6	4	5	1	5	2	9	6	5	2	With no profits.	
Scottish Amicable,	...	2	3	0	2	6	5	2	11	9	2	18	2	3	6	3	16	3	4	9	1	5	5	1	6	6	4				With whole profits.	
"	...	1	9	3	1	12	0	1	16	7	2	2	2	2	9	7	2	18	3	10	9	4	6	4	5	7	2				Minimum scale on assumed bonus, varying with actual bonus.	
"	...	1	14	11	1	17	11	2	2	7	2	8	6	2	16	0	3	5	6	3	19	4	4	18	0	6	1	10			With no profits.	
Scottish Equitable,	1	17	4	2	2	1	2	5	3	2	10	3	2	16	10	3	5	3	16	7	4	10	9	5	9	10	6	15	5		With whole profits.	
"	1	9	4	1	18	9	1	16	3	2	0	9	2	6	9	2	14	10	3	5	3	19	3	4	18	1	6	3	10		With no profits.	
Scottish Provident,	...	1	15	8	1	18	0	2	1	6	2	6	10	2	14	9	3	5	9	4	1	7	5	1	11	6	6	7			With whole profit, commencing after Prem. at 4 p. c. comp. Interest has paid up Policy.	
Scot. Widows' Fund,	1	17	0	2	2	1	2	6	6	2	11	9	2	18	2	3	6	3	16	4	4	10	7	5	13	8	7	4	9		With whole profits.	
"	1	8	7	1	12	1	1	16	7	2	2	0	2	8	0	2	15	11	3	5	10	4	0	2	4	19	6	6	0		With no profits.	
United King. Temp. and General,	1	13	3	1	17	4	2	2	7	2	8	10	2	15	7	3	4	11	3	15	5	4	10	6	5	13	8	7	4	9	With whole profits.	
"	1	9	11	1	13	7	1	18	4	2	3	11	2	10	0	2	18	5	3	7	11	4	1	6	5	2	4	6	10	3		With no profits.

Note.—Women are, in general, charged, if between 15 and 50 years of age, Five Shillings per cent. in addition to above Rates.

RATES OF COLONIAL AND OF AMERICAN OFFICES DOING BUSINESS IN GREAT BRITAIN.

OFFICES.	ANNUAL PREMIUM CHARGED FOR THE ASSURANCE OF £100 FOR THE WHOLE PERIOD OF LIFE AT THE AGES OF										
	15	20	25	30	35	40	45	50	55	60	
Colonial Mutual, .	£ s. d. ...	£ s. d. 1 16 4	£ s. d. 1 19 7	£ s. d. 2 4 8	£ s. d. 2 11 9	£ s. d. 3 0 9	£ s. d. 3 11 1	£ s. d. 4 6 2	£ s. d. 5 9 9	£ s. d. 7 3 3	With whole profits.
Equitable of the United States,	1 19 9	1 19 9	1 19 9	2 5 5	3 12 9	3 2 7	3 15 11	4 14 4	5 19 10	7 15 3	With whole profits, but no Policy under £200.
Mutual Life Assur- ance Co. of New York,	...	...	2 1 0	2 6 7	2 14 2	3 4 5	3 18 2	4 17 0	6 3 2	7 19 10	With whole profits.
New York Life, .	...	...	1 19 10	2 5 5	2 12 9	3 2 7	3 16 0	4 14 4	5 19 10	7 15 3	With whole profits.

Note.—See Note at end of Mixed Offices and Mutual Offices as to Female Life. Mutual Life of New York charges 10 per cent. per annum extra till past change of life.

LIST OF ABBREVIATIONS.

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A.				
ab. . .	above . . .	209	Rock	16
abt. . .	about . . .	206	Law Life	18
Accelern. . .	Acceleration . . .	199	British Equitable	17
Accelg. . .	Accelerating . . .	211	Scottish Economic	17
accumd. . .	accumulated . . .	213	Scottish Temperance, Limited	15
Act. . .	Actuaries . . .	198	Alliance	25
Acty. . .	Actuary . . .	211	Royal Exchange	34
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afd. . .	affected . . .	204	Law Life	24
Afn. . .	African . . .	211	Royal Exchange	30
aft. . .	after . . .	199	City of Glasgow	15
allegu. . .	allegation . . .	215	University	24
allwd. . .	allowed . . .	205	Life Association of Scotland	30
Amer. . .	America . . .	213	British Empire,	30
amt. . .	amount . . .	205	Edinburgh	16
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Assrd. . .	Assured . . .	216	Westminster and General	24
Austa. . .	Australia . . .	210	Queen	30
Aust'lia. . .	do. . .	202	Imperial	30
Austl. . .	do. . .	213	Scottish Union and National	30
Australn. . .	Australian . . .	211	Royal Exchange	30
av. . .	average . . .	216	Westminster and General	18
aver. . .	do. . .	203	Imperial	18
avge. . .	do. . .	209	Prudential	18
B.				
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bfre . . .	before . . .	201	Edinburgh	20
Br. . .	Branch . . .	207	Northern	16
Brh. . .	do. . .	209	Provincial	16
B. of T. . .	Board of Trade . . .	215	United Kent, Limited	9

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ABBREVIATIONS.	FULL WORDS.	PAGE.	OFFICE.	No.
C.				
c. . .	cent. . .	209	Prudential . . .	31
ct. . .	do. . .	198	Alliance . . .	31
Can. . .	Canada . . .	217	Whittington . . .	30
Cap. . .	Capital . . .	203	Imperial . . .	18
Capl. . .	Capital . . .	211	Royal . . .	31
Carl. . .	Carlisle . . .	203	Guardian . . .	31
cer. . .	certificate . . .	203	do. . .	21
certif. . .	do. . .	205	Liverpool & London & Globe . . .	21
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Comp. . .	Compound . . .	219	Economic . . .	31
commt. . .	commencement . . .	205	Life Association . . .	30
Con. . .	Contingent . . .	207	North British and Mercantile . . .	31
con. . .	convertible . . .	205	Life Association . . .	20
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D.				
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depg. . .	depending . . .	205	Life Association of Scotland . . .	17
Digs. . .	Diggings . . .	213	British Empire . . .	30
Div. . .	Dividend . . .	204	Law Life . . .	16
Directs. . .	Directors . . .	203	Lancashire . . .	30
Dirs. . .	do. . .	205	Liverpool & London & Globe . . .	30
dis. . .	discretion . . .	215	University . . .	20
Discret. . .	Discretion . . .	215	Universal . . .	21
Discretn. . .	do. . .	215	do. . .	20
disc. . .	discount . . .	199	Caledonian . . .	25
Divis. . .	Division . . .	203	Midland Counties . . .	16
dist. . .	distant . . .	205	Legal and General . . .	30
dist. . .	distance . . .	213	Clergy Mutual . . .	15
dur. . .	duration . . .	203	Guardian . . .	21
E.				
empowd. . .	empowered . . .	216	Westminster and General . . .	24
End. . .	Endowment . . .	204	Law Union . . .	31
Endow. . .	do. . .	202	General . . .	31
Endowts. . .	Endowments . . .	210	Royal . . .	31
Eng. . .	English . . .	203	Positive, Limited . . .	31
Eng. . .	England . . .	215	University . . .	31
eq. . .	equal . . .	202	General . . .	31
Equite. . .	Equitable . . .	209	Provincial . . .	31
Eqr. . .	Equator . . .	209	Prudential . . .	30
equivit. . .	equivalent . . .	204	Law Life . . .	22
equivt. . .	equivalent . . .	203	Pelican . . .	22
ers. . .	errors . . .	203	Guardian . . .	23
Eure. . .	Europe . . .	210	Queen . . .	30
ex. . .	extra . . .	205	London Assurance . . .	30
ex. . .	except . . .	212	Scottish Life, Limited . . .	30
exc. . .	do. . .	199	City of Glasgow . . .	22
exc. . .	excepted . . .	205	Life Association of Scotland . . .	30
exh. . .	exhaustion . . .	211	Scottish Economic . . .	22
exp. . .	expectation . . .	205	Life Association of Scotland . . .	17
exp. . .	Experience . . .	215	Universal . . .	31
experce. . .	experience . . .	199	Church of England . . .	31
ext. . .	extra . . .	215	University . . .	30
Extng. . .	Extinguishing . . .	211	Scottish Economic . . .	17

GENERAL DIRECTORY OF LIFE ASSURANCE OFFICES. 241

ABBREVIATIONS.	FULL WORDS.	PAGE.	OFFICE.	No.
F.				
Fds.	Funds	217	Yorkshire	18
F. F.	Fire Funds	219	Hand-in-Hand	5 & 7
G.				
Gen.	General	217	Yorkshire	31
g. h.	good health	211	Scottish Economic	22
Gov.	Government	209	Prudential	31
Govr.	Governor	211	Royal Exchange	33
Govt.	Government	201	Crown	31
Griff.	Griffith	215	University	31
H.				
hd.	hand	201	Edinburgh	20
H. E. I. Co.'s	Hon. East India Co.'s	215	Universal	31
H.M.	Healthy Males	198	Alliance	31
H.M. (5)	Healthy Males. After first 5 years' experience	198	Alliance	31
I.				
Immed.	Immediately	205	Liverpool & London & Globe	25
in.	intention	205	Legal and General	30
Inc.	Includes	219	Hand-in-Hand	5
incur.	Incurred	201	English and Scottish Law	30
Ind.	Indian	215	Universal	31
indisput.	indisputable	211	Scottish Temperance	23
Inst.	Institute	198	Alliance	31
int.	interest	198	Alliance	31
intent.	intention	215	Union	30
isd.	issued	204	Law Life	22
J.				
jus.	justice	215	University	24
just.	justice	211	Royal Exchange	24
K.				
King.	Kingdom	205	Life Association of Scotland	26
L.				
L.	Latitude	204	Law Life	30
ld.	limited	204	Law Life	22
lic.	licence	205	Legal and General	30
l'nce.	licence	216	Westminster and General	30
l'mid.	limited	211	Royal	22
M.				
m.	month	215	University	24
mo.	do.	200	Commercial Union	21
mo.	months	203	Guardian	21
mos.	do.	201	Eagle	25
makg.	making	199	Church of England	17
Mediterr.	Mediterranean	211	Royal Exchange	30
Mil.	Military	204	Law Life	30
Milit.	do.	205	Life Association of Scotland	30
Mily.	do.	213	Scottish Union and National	30
moder.	moderate	201	English and Scottish Law	20
mort.	mortality	215	Universal	31
mut.	mutually	216	Westminster and General	22

242 GENERAL DIRECTORY OF LIFE ASSURANCE OFFICES.

ABBREVIATIONS.	FULL WORDS.	PAGE.	OFFICE.	No.
N.				
N. . .	North . . .	204	Law Life . . .	30
N. . .	New . . .	202	General . . .	30
Navl. . .	Naval . . .	204	Law Life . . .	30
No. . .	Number . . .	204	Law Life . . .	22
Non-part. . .	Non-Participating . . .	208	Pelican . . .	31
Non-partg. . .	do. . .	215	United Kent, Limited . . .	31
N. P. . .	do. . .	213	Scottish Union and National . . .	31
num. . .	number . . .	214	Star . . .	22
N. Z. . .	New Zealand . . .	204	Law Life . . .	30
O.				
Occup. . .	Occupation . . .	208	Positive, Limited . . .	30
om. . .	omitted . . .	204	Legal and General . . .	20
Ord. . .	Ordinary . . .	205	Life Association of Scotland . . .	20
Ordy. . .	do. . .	209	Provincial . . .	16
origally . .	originally . . .	216	Westminster and General . . .	24
P.				
p. . .	payments . . .	211	Rock . . .	22
par. . .	parties . . .	208	Pelican . . .	24
part. . .	participating . . .	208	do. . .	31
Parteg. . .	do. . .	215	United Kent, Limited . . .	31
Partn. . .	Participation . . .	210	Rock . . .	31
parts. . .	parties . . .	211	Royal Exchange . . .	24
pt. . .	part . . .	205	London Assurance . . .	30
pd. . .	paid . . .	200	Commercial Union . . .	21
pay'le. . .	payable . . .	206	London and Lancashire . . .	17
payt. . .	payment . . .	211	Scottish Economic . . .	17
payts. . .	payments . . .	213	Scottish Temperance, Limited . . .	22
pay. . .	payable . . .	217	Whittington . . .	27
payg. . .	paying . . .	201	Edinburgh . . .	20
p. c. . .	per centage . . .	218	Clergy Mutual . . .	31
permant. . .	permanent . . .	201	Edinburgh . . .	33
Pla. . .	Policies . . .	213	Scottish Union and National . . .	31
Pol. . .	Policy . . .	199	City of Glasgow . . .	22
Pols. . .	Policies . . .	209	Prudential . . .	22
Practly. . .	Practically . . .	204	Law Life . . .	21
Prem. . .	Premiums . . .	215	University . . .	21
Profs. . .	Profits . . .	210	Queen . . .	16
Pr. . .	Premium . . .	217	Whittington . . .	17
Premis. . .	do. . .	199	British Equitable . . .	17
Prof. . .	Profits . . .	213	Standard . . .	16
pro. . .	protected . . .	215	University . . .	24
pro. . .	proposal . . .	203	Guardian . . .	22
Pro. . .	Promissory . . .	203	Imperial . . .	21
pro. . .	proportional . . .	204	Law Life . . .	22
prop. . .	do. . .	214	Star . . .	22
proport. . .	do. . .	208	Positive, Limited . . .	22
propor. . .	proportion . . .	208	do. . .	22
proptn. . .	do. . .	213	Scottish Temperance, Limited . . .	22
Props. . .	Proprietors . . .	213	Standard . . .	16
prot. . .	protected . . .	208	Pelican . . .	24
provis. . .	provision . . .	203	Gresham . . .	15
Q.				
Qua . . .	(Latin) as regards . . .	204	Imperial . . .	20

GENERAL DIRECTORY OF LIFE ASSURANCE OFFICES. 243

ABBREVIATIONS.	FULL WORDS.	PAGE.	OFFICE.	No.
R.				
Rdtn .	Reduction .	199	British Equitable .	17
red. .	reduce .	205	Life Association of Scotland .	17
Redn. .	Reduction .	217	Whittington .	17
Reduc. .	do. .	205	Legal and General .	17
Reduct. .	do. .	203	Guardian .	17
Resid. .	Residing .	205	Legal and General .	30
Resid. .	Residence .	205	Life Association of Scotland .	30
repres. .	representatives .	223	Reliance .	24
restr. .	restrictions .	207	North British and Mercantile .	30
rotat. .	rotation .	203	Guardian .	33
rotn. .	do. .	204	Law Life .	33
Revers. .	Reversions .	201	Crown .	31
S.				
S. .	South .	204	Law Life .	30
satis. .	satisfied .	203	Lancashire .	30
sch. .	schedule .	215	United Kent, Limited .	9
ser. .	service .	215	Universal .	31
Sharehrrs. .	Shareholders .	204	Law Union .	16
sing. .	single .	216	West of England .	30
sm. .	small .	201	Edinburgh .	20
spl. .	special .	215	Universal .	31
Srv. .	Survivorship .	203	Imperial .	31
statd. .	stated .	215	United Kent, Limited .	9
sui. .	suicide .	215	University .	24
suic. .	do. .	211	Royal Exchange .	24
S. Un. .	Scottish Union .	213	Scottish Union and National .	31
sur. .	surrender .	198	Alliance .	22
surren. .	do. .	199	Caledonian .	22
T.				
Tbe. .	Table .	215	Universal .	31
U.				
Unit. .	United .	205	Life Association of Scotland .	28
und. .	under .	213	Scottish Temperance, Limited .	15
unfav. .	unfavourable .	208	Positive, Limited .	30
V.				
val. .	value .	210	Queen .	20
W.				
W. .	West .	201	English and Scottish Law .	30
wh. .	which .	210	Rock .	31
wh. .	whole .	213	Standard .	16
W. L. .	Whole Life .	204	Law Union .	31
Y.				
yr. .	year .	205	Legal and General .	30
ys. .	years .	199	Caledonian .	23
Z.				
Zeald. .	Zealand .	210	Queen .	30



APPENDIX

TO

GENERAL DIRECTORY OF LIFE ASSURANCE OFFICES,
SPECIFYING AMOUNTS OF CAPITAL PAID UP, LIFE
AND ANNUITY FUNDS, Etc.,

AND OF

INVESTMENT OF THE SAME ON MORTGAGE,
GOVERNMENT SECURITY, Etc.,

Bringing down Results One Year later than in General Directory.

EXTRACTED FROM

RETURN—LIFE ASSURANCE COMPANIES,
ORDERED BY THE HOUSE OF COMMONS TO BE PRINTED,
1st MARCH 1887.

246 GENERAL DIRECTORY OF LIFE ASSURANCE OFFICES.

APPENDIX TO GENERAL DIRECTORY

Extracted solely from Return—Life Assurance Companies, under
Ordered by The House of Commons

I.—MIXED

OFFICES.	4.*	7.	8.	9.	14.	10.
	Capital Paid-up and Invested.	Amount of Life and Annuity Funds.	Amount of other Liabilities.	Amount of Fire Funds.	Amount of Marine Funds.	Date to which Account brought down.
Alliance, . .	£ 550,000	£ 1,350,271	£ 150,341	£ 583,029	£ ...	31 Dec. 1885.
Atlas, . .	144,000	1,402,483	110,304	144,185	...	25 Dec. 1885.
British Equitable, .	53,072	1,030,343	17,692	...	...	31 Jan. 1886.
Caledonian, .	90,000	773,842	42,827	251,114	...	31 Dec. 1885.
Church of England,	40,000	684,437	10,452	43,332	...	31 Dec. 1885.
City of Glasgow, .	60,000	1,374,995	24,392	...	...	20 Jan. 1886.
Clerical, Medical, and General,	50,000	2,715,760	32,229	...	...	30 June 1886.
Commercial Union (Limited),	250,000	921,930	208,333	763,070	229,704	31 Dec. 1885.
Crown, . .	328,763	1,518,512	24,609	...	...	25 Mar. 1886.
Eagle, . .	167,867	2,762,231	104,468	...	...	31 Dec. 1885.
Edinburgh, . .	127,617	1,991,573	50,075	...	...	31 Mar. 1886.
English and Scottish Law,	77,138	1,308,440	17,467	...	...	25 Dec. 1885.
Equity and Law, .	60,000	2,002,598	30,714	...	...	31 Dec. 1885.
General, . .	50,000	846,510	44,293	38,070	...	31 Dec. 1885.
Gresham, . .	21,712	3,689,234	65,380	...	...	30 June 1886.
Guardian, . .	1,000,000	2,177,349	161,284	539,524	...	31 Dec. 1885.
Carry forward, .	3,070,169	26,550,508	1,094,860	2,312,324	229,704	.

* Nos. in General Directory parallel here.

GENERAL DIRECTORY OF LIFE ASSURANCE OFFICES. 247

OF LIFE ASSURANCE OFFICES.

"Life Assurance Companies Act, 1870," during Year 1886.

to be Printed, 1st March 1887.

OFFICES.

26.* Invested on Mortgage.	27. Invested on Govern- ment Security.	28. Invested in Loans on Rates, and on Lands, Houses, and Ground Rents.	29. Invested otherwise than under Nos. 26, 27, 28.	NOTES.
£ 188,370	£ 226,329	£ 1,532,647	£ 636,295	No. 29. Shares $\frac{1}{4}$ th, Debentures $\frac{1}{4}$ th, Indian and Colonial Government Securities $\frac{1}{4}$ th, Alliance British and Foreign Company Shares $\frac{1}{4}$ th.
421,118	93,772	1,119,003	167,079	9. Fire Fund and Reserve. 29. Loans on Policies about $\frac{1}{4}$ d, Indian and Colonial Government Securities $\frac{1}{4}$ d, Cash $\frac{1}{4}$ th.
212,279	20,063	700,207	168,568	29. Indian and Colonial Government Securities about $\frac{1}{4}$ d, Loans on Policies $\frac{1}{4}$ th, cash $\frac{1}{4}$ th.
453,888	...	354,899	348,996	29. Debentures $\frac{1}{4}$ th, Cash $\frac{1}{4}$ th, Shares $\frac{1}{4}$ th, Loans on Policies about $\frac{1}{4}$ th.
296,068	...	246,320	235,833	29. Indian and Colonial Government Securities $\frac{1}{4}$ th, Loans on Policies $\frac{1}{4}$ th, Foreign Gov. Securities $\frac{1}{4}$ th. Loans on Per. Securities $\frac{1}{4}$ th.
959,149	...	180,422	319,816	29. Shares $\frac{1}{4}$ d, Loans on Policies $\frac{1}{4}$ th, Agents' Balances $\frac{1}{4}$ th.
609,765	122,745	685,605	1,379,874	29. Debentures above $\frac{1}{4}$, Indian and Colonial Gov. Sec. about $\frac{1}{4}$ th, Loans on Policies about $\frac{1}{4}$ th, Shares about $\frac{1}{4}$ th.
804,380	146,651	260,350	1,161,656	9. Fire Funds and Reserve. 29. Agents' Balances above $\frac{1}{4}$, Foreign Government Sec. $\frac{1}{4}$ th, Cash about $\frac{1}{4}$ th, Debentures about $\frac{1}{4}$ th.
741,780	...	383,376	746,728	29. Debentures under $\frac{1}{4}$ th, Indian and Colonial Gov. Sec. $\frac{1}{4}$ th, Loans on Policies about $\frac{1}{4}$ th.
2,257,993	...	79,167	697,406	29. Loans on Policies about $\frac{1}{4}$ th, Life Interests above $\frac{1}{4}$ th, Loans on Per. Securities about $\frac{1}{4}$ th, Shares about $\frac{1}{4}$ th.
881,047	...	741,830	546,388	29. Indian and Colonial Government Securities about $\frac{1}{4}$ th, Loans on Policies about $\frac{1}{4}$ th, Shares about $\frac{1}{4}$ th, Debentures $\frac{1}{4}$ th.
454,569	...	18,391	930,085	29. Indian and Colonial Government Securities above $\frac{1}{4}$ th, Debentures $\frac{1}{4}$ th, Cash about $\frac{1}{4}$ th, Loan on Per. Securities about $\frac{1}{4}$ th.
1,205,980	58,403	18,000	810,929	29. Life Interests and Reversions $\frac{1}{4}$ th, Shares about $\frac{1}{4}$ th, Debentures $\frac{1}{4}$ th.
230,770	10,942	379,338	357,823	29. Agents' Balances above $\frac{1}{4}$ th, Shares above $\frac{1}{4}$ th, Indian and Colonial Government Sec. $\frac{1}{4}$ th, Foreign Government Securities about $\frac{1}{4}$ th.
259,908	83,332	739,766	2,693,320	29. Debentures about $\frac{1}{4}$, Foreign Government Sec. under $\frac{1}{4}$ th, Loans on Policies about $\frac{1}{4}$ th, Shares above $\frac{1}{4}$ th, Agents' Balances $\frac{1}{4}$ th.
1,808,654	90,409	351,301	1,627,793	29. Indian and Colonial Government Securities $\frac{1}{4}$ d, Debentures about $\frac{1}{4}$ th, Shares above $\frac{1}{4}$ th, For. Gov. Sec. about $\frac{1}{4}$ th, Cash about $\frac{1}{4}$ th.
11,785,718	852,646	7,790,622	12,828,579	

* Nos. in General Directory parallel here.

248 GENERAL DIRECTORY OF LIFE ASSURANCE OFFICES.

APPENDIX TO GENERAL DIRECTORY OF

I.—MIXED

OFFICES.	4.*	7.	8.	9.	14.	10.
	Capital Paid-up and Invested.	Amount of Life and Annuity Funds.	Amount of other Liabilities.	Amount of Fire Funds.	Amount of Marine Funds.	Date to which Account brought down.
	£	£	£	£	£	
Brought forward,	8,070,169	26,550,508	1,094,860	2,312,324	229,704	
Imperial Life, .	192,710	1,098,170	19,247	...	...	31 Jan. 1886.
Lancashire, .	272,986	678,867	132,669	333,639	...	31 Dec. 1885.
Law Life, .	1,042,048	4,177,091	29,084	...	...	31 Dec. 1885.
Law Union, .	60,000	737,959	54,987	49,825	...	30 Nov. 1885.
Legal and General,	186,469	1,948,700	30,011	...	...	31 Dec. 1885.
Life Association of Scotland, .	87,500	2,993,690	65,490	...	...	5 April 1886.
Liverpool and Lon- don and Globe, .	245,640	3,698,612	438,768	1,850,000 1,249,715	...	31 Dec. 1885.
London and Lanca- shire, .	18,341	404,198	2,069	...	...	31 Dec. 1885.
London Assurance,	448,275	1,870,559	199,647	744,351	154,946	31 Dec. 1885.
London, Edinburgh, and Glasgow, .	53,898	32,347	17,591	...	...	31 Dec. 1885.
Midland Counties, .	32,500	42,034	5,094	26,995	...	24 Mar. 1886.
National of Ireland,	100,000	311,287	57,805	85,000	...	31 Dec. 1885.
North British and Mercantile, .	625,000	4,179,072	278,125	1,856,266	...	31 Dec. 1885.
Northern, .	300,000	1,960,708	247,073	742,444	...	31 Dec. 1885.
Patriotic of Ireland,	121,985	106,538	22,257	25,974	...	31 July 1886.
Pelican, .	159,071	1,168,157	41,030	...	...	31 Dec. 1885.
Carry forward, .	7,016,587	51,958,497	2,735,807	9,276,533	384,650	

* Nos. in General Directory parallel here.

LIFE ASSURANCE OFFICES—continued.

OFFICES.

26.* Invested on Mortgage.	27. Invested on Government Security.	28. Invested in Loans on Rates, and on Lands, Houses, and Ground Rents.	29. Invested otherwise than under Nos. 26, 27, 28.	NOTES.
£	£	£	£	
11,785,718	852,646	7,790,622	12,828,579	No. 29. Indian and Colonial Government Sec. above $\frac{1}{2}$. Debentures above $\frac{1}{2}$ th. Loans on Policies $\frac{1}{2}$ th, Cash $\frac{1}{2}$ th.
543,04	33,421	158,614	575,061	29. Foreign Government Securities $\frac{1}{2}$ d. Shares about $\frac{1}{2}$ th, Debentures about $\frac{1}{2}$ th. Cash $\frac{1}{2}$ th.
547,481	...	58,190	812,490	29. Indian and Colonial Government Securities under $\frac{1}{2}$ th, Shares under $\frac{1}{2}$ th, Debentures under $\frac{1}{2}$ th, Loans on Policies $\frac{1}{2}$ th.
3,151,256	47,309	1,272,352	776,806	29. Life Interests and Reversions above $\frac{1}{2}$ th, Loans on Policies $\frac{1}{2}$ th.
542,715	4,761	20,271	335,024	29. Debentures under $\frac{1}{2}$ d, Life Interests under $\frac{1}{2}$ d, Indian and Col. Gov. Sec. above $\frac{1}{2}$ th.
1,334,589	52,250	126,248	652,093	29. Debentures $\frac{1}{2}$ th, Loans on Policies $\frac{1}{2}$ th, Ind. and Colonial Government Securities $\frac{1}{2}$ th, Cash $\frac{1}{2}$ th, Balances $\frac{1}{2}$ th.
1,228,547	66,403	170,943	1,680,787	9. Fire Fund and Reserve Globe Annuitants.
1,972,075	170,342	1,084,259	4,256,059	29. Shares above $\frac{1}{2}$ d, Debentures under $\frac{1}{2}$ th, Cash $\frac{1}{2}$ th, Foreign Government Securities about $\frac{1}{2}$ th, Life Interests $\frac{1}{2}$ th.
69,297	...	40,057	315,254	29. Indian and Colonial Government Sec. about $\frac{1}{2}$ d, Debentures about $\frac{1}{2}$ th, Shares about $\frac{1}{2}$ th, Agents' Balances $\frac{1}{2}$ th.
1,088,854	344,235	1,161,567	823,122	9. Fire Funds and Reserve. 29. For. Gov. Sec. under $\frac{1}{2}$ th, Life Interests above $\frac{1}{2}$ th, Ind. and Col. Gov. Sec. about $\frac{1}{2}$ th, Cash about $\frac{1}{2}$ th.
6,893	20,498	4,124	72,316	29. Indian and Colonial Government Sec. $\frac{1}{2}$ th, Prel. Exp. Def. about $\frac{1}{2}$ th, Agents' Balances $\frac{1}{2}$ th.
78,692	...	13,219	19,712	9. Fire Funds and Reserve. 29. Cash under $\frac{1}{2}$ th, Shares above $\frac{1}{2}$ th, Agents' Bal. about $\frac{1}{2}$ th.
180,503	21,719	35,705	316,165	29. Debentures $\frac{1}{2}$ d, Shares under $\frac{1}{2}$ d, Loans on Policies $\frac{1}{2}$ th, Agents' Balances under $\frac{1}{2}$ th, Indian and Colonial Gov. Securities $\frac{1}{2}$ th.
2,702,313	461,685	919,793	2,854,672	29. Indian and Colonial Gov. Sec. above $\frac{1}{2}$ th, Foreign Gov. Securities under $\frac{1}{2}$ th, Agents' Balances under $\frac{1}{2}$ th, Cash under $\frac{1}{2}$ th, Shares about $\frac{1}{2}$ th, Debentures above $\frac{1}{2}$ th.
540,576	103,339	587,900	2,018,410	29. Indian and Colonial Gov. Sec. about $\frac{1}{2}$ th, Shares about $\frac{1}{2}$ th, For. Gov. Sec. above $\frac{1}{2}$ th, Agents' Bal. $\frac{1}{2}$ th, Debentures $\frac{1}{2}$ th, Loans on Policies $\frac{1}{2}$ th, Life Interests $\frac{1}{2}$ d, Cash $\frac{1}{2}$ d.
162,599	7,198	6,295	100,662	29. Debentures $\frac{1}{2}$ th, Agents' Balances $\frac{1}{2}$ th, Outstanding Interest $\frac{1}{2}$ th, Cash about $\frac{1}{2}$ th.
744,891	74,394	30,024	518,949	29. Debentures about $\frac{1}{2}$, Ind. and Col. Gov. Sec. about $\frac{1}{2}$ th, For. Gov. Sec. under $\frac{1}{2}$ th, Shares $\frac{1}{2}$ th, Loans on Per. Sec. $\frac{1}{2}$ th, Loans on Policies $\frac{1}{2}$ th.
26,675,040	2,260,200	13,480,683	28,956,161	

* Nos. in General Directory parallel here.

250 GENERAL DIRECTORY OF LIFE ASSURANCE OFFICES.

APPENDIX TO GENERAL DIRECTORY OF

I.—MIXED

OFFICES.	4.* Capital Paid-up and Invested.	7. Amount of Life and Annuity Funds.	8. Amount of other Liabilities.	9. Amount of Fire Funds.	14. Amount of Marine Funds.	10. Date to which Account brought down.
	£	£	£	£	£	
Brought forward, Positive (Limited),	7,016,587 69,775	51,958,497 801,353	2,735,807 12,605	9,276,533 ...	384,650 ...	31 Dec. 1885.
Provident, . . .	50,790	2,405,001	53,896	...	...	31 Dec. 1885.
Provincial, . . .	29,821	306,783	3,217	...	...	31 Dec. 1885.
Prudential (Ordinary Branch) (Limited),	...	1,445,120	2,710	...	...	31 Dec. 1885.
Queen, . . .	180,035	539,825	142,404	310,298	...	31 Dec. 1885.
Rock, . . .	1,155,534	1,844,750	51,461	...	...	31 Dec. 1885.
Royal, . . .	289,545	3,148,886	497,937	1,850,000	...	31 Dec. 1885.
Royal Exchange, .	689,220	2,012,768	120,788	980,165	221,519	30 April 1886.
Sceptre (Limited), .	10,485	253,727	71	...	...	31 Dec. 1885.
Scottish Imperial, .	63,256	203,678	13,387	...	...	31 Dec. 1885.
Scottish Life (Ld.),	50,000	47,298	10,606	...	...	31 May 1886.
Scottish Metropolitan,	24,000	60,915	540	...	...	31 Dec. 1885.
Scottish Provincial,	60,000	1,403,772	51,111	96,157	...	31 Jan. 1886.
Scottish Temperance (Limited),	22,500	7,254	2,633	...	...	31 Dec. 1885.
Scottish Union and National,	282,571	2,655,727	165,109	180,833	...	31 Dec. 1885.
Standard Life, . .	120,000	6,215,358	257,615	...	...	15 Nov. 1885.
Star, . . .	5,000	2,310,429	31,277	...	...	31 Dec. 1885.
Carry forward, .	10,119,119	77,121,141	4,153,174	12,694,036	606,169	

* Nos. in General Directory parallel here.

LIFE ASSURANCE OFFICES—continued.

OFFICES.

26.* Invested on Mortgage.	27. Invested on Govern- ment Security.	28. Invested in Loans on Rates, and on Lands, Houses, and Ground Rents.	29. Invested otherwise than under Nos. 26, 27, 28.	NOTES.
£	£	£	£	
26,675,040 17,970	2,260,200 ...	13,480,683 22,188	28,956,151 843,625	No. 29. Indian and Colonial Government Sec. about $\frac{1}{4}$ th, Shares $\frac{1}{4}$ th, Loans on Policies $\frac{1}{4}$ th.
1,626,056	15,920	122,226	745,485	29. Shares above $\frac{1}{4}$ th, Loans on Policies $\frac{1}{4}$ th, Indian and Col. Government Securities $\frac{1}{4}$ th, For. Government Securities $\frac{1}{4}$ th.
50,162	...	74,686	214,973	29. Indian and Colonial Government Securities $\frac{1}{4}$ d, Shares $\frac{1}{4}$ th, Debentures $\frac{1}{4}$ th.
459,331	295,156	137,609	555,734	29. Debentures above $\frac{1}{4}$ ths, Indian and Colonial Government Securities above $\frac{1}{4}$ th, Life Interests under $\frac{1}{4}$ th, Cash under $\frac{1}{4}$ th.
206,236	...	273,635	692,691	9. Fire Funds and Reserve. 29. Foreign Gov. Securities above $\frac{1}{4}$ th, Shares under $\frac{1}{4}$ th, Debentures $\frac{1}{4}$ th, Agents' Balances about $\frac{1}{4}$ th.
1,632,542	387	147,263	1,271,603	29. Indian and Colonial Government Sec. above $\frac{1}{4}$ th, Debentures above $\frac{1}{4}$ th, Cash $\frac{1}{4}$ th, Loans on Policies $\frac{1}{4}$ th.
1,816,404	211,868	986,294	2,771,802	9. Fire Funds and Reserve. 8. Profit and Loss Balances $\frac{1}{4}$ th. 29. Shares above $\frac{1}{4}$, Foreign Government Securities $\frac{1}{4}$ th, Debentures $\frac{1}{4}$ th, Loans on Policies $\frac{1}{4}$ th, Cash about $\frac{1}{4}$ th.
1,681,947	413,521	764,324	1,164,668	9. Fire Funds and Reserve. 29. Debentures above $\frac{1}{4}$ d, Shares $\frac{1}{4}$ th, Indian and Colonial Government Securities $\frac{1}{4}$ th.
79,772	...	79,655	104,856	29. Indian and Colonial Government Securities $\frac{1}{4}$, Debentures $\frac{1}{4}$ th, Loans on Policies $\frac{1}{4}$ th.
44,312	...	182,392	53,617	4. Capital and Reserve. 29. Shares $\frac{1}{4}$, Agents' Balances $\frac{1}{4}$ th.
39,037	...	1,206	67,661	29. Indian and Colonial Government Securities above $\frac{1}{4}$, Debentures $\frac{1}{4}$ d, Cash $\frac{1}{4}$ th.
36,007	...	14,777	34,671	29. Indian and Colonial Government Securities above $\frac{1}{4}$.
325,614	...	80,506	1,204,920	9. Fire Funds and Reserve. 29. Shares above $\frac{1}{4}$ th, Debentures under $\frac{1}{4}$ th, Indian and Col. Gov. Securities $\frac{1}{4}$ th, Cash $\frac{1}{4}$ th.
5,205	...	846	26,336	29. Indian and Colonial Government Securities $\frac{1}{4}$ ths.
1,947,701	6,920	263,086	1,066,603	8. Includes Provision for Div. 29. Cash above $\frac{1}{4}$ d, Shares $\frac{1}{4}$ th, Indian and Colonial Gov. Sec. $\frac{1}{4}$ th, Agents' Balances $\frac{1}{4}$ th.
4,442,516	39,810	305,831	1,804,816	29. Indian and Colonial Government Securities $\frac{1}{4}$ d, Loans on Policies $\frac{1}{4}$ th, Cash $\frac{1}{4}$ th, Agents' Balances $\frac{1}{4}$ th.
586,671	23,803	210,781	1,525,451	29. Shares $\frac{1}{4}$ d, Indian and Colonial Government Sec. above $\frac{1}{4}$ th, Loans on Personal Securities above $\frac{1}{4}$ th, Loans on Policies $\frac{1}{4}$ th.
41,672,523	3,267,535	17,147,918	42,605,663	

* Nos. in General Directory parallel here.

252 GENERAL DIRECTORY OF LIFE ASSURANCE OFFICES.

APPENDIX TO GENERAL DIRECTORY OF

I.—MIXED

OFFICES.	4.* Capital Paid-up and Invested.	7. Amount of Life and Annuity Funds.	8. Amount of other Liabilities.	9. Amount of Fire Funds.	14. Amount of Marine Funds.	10. Date to which Account brought down.
Brought forward, Sun Life, . . .	£ 10,119,119 378,542	£ 77,121,141 1,738,554	£ 4,163,174 74,586	£ 12,694,036 ...	£ 606,169 ...	24 June 1886.
Union, . . .	30,000	1,167,606	63,891	741,449	...	30 June 1886.
United Kent Life, Limited, . . .	132,976	867,257	5,140	...	...	25 Mar. 1886.
Universal, . . .	68,658	1,023,074	25,298	...	...	31 Dec. 1885.
University, . . .	29,900	969,227	34,520	...	...	1 May 1886.
Westminster and General, . . .	25,973	481,214	8,824	...	...	31 Dec. 1885.
West of England, . .	210,000	911,856	43,265	60,532	...	31 Dec. 1885.
Whittington, . . .	22,583	134,002	4,101	...	...	30 April 1886.
Yorkshire, . . .	50,000	566,406	21,358	228,497	...	28 Feb. 1886.
Total, . . .	11,062,751	84,475,337	4,434,157	13,724,514	606,169	

* Nos. in General Directory parallel here.

LIFE ASSURANCE OFFICES—*continued.*

OFFICES.

26.* Invested on Mortgage.	27. Invested on Govern- ment Security.	28. Invested in Loans on Rates, and on Lands, Houses, and Ground Rents.	29. Invested otherwise than under Nos. 26, 27, 28.	NOTES.
£ 41,672,523 432,123	£ 3,267,535 ...	£ 17,147,918 354,217	£ 42,605,663 1,895,842	No. 29. Debentures about $\frac{1}{4}$ d, Indian and Col. Government Securities $\frac{1}{4}$ th, Shares $\frac{1}{16}$ th, Loans on Policies under $\frac{1}{16}$ th.
1,013,291	166,617	83,780	739,258	9. Fire Funds and Reserve. 29. Shares $\frac{1}{4}$ d, Debentures above $\frac{1}{4}$ th, Indian and Colonial Government Securities about $\frac{1}{4}$ th.
398,595	14,000	20,001	72,777	29. Shares above $\frac{1}{4}$, Cash above $\frac{1}{4}$ th, Loans on Policies above $\frac{1}{4}$ th.
280,024	...	126,040	710,966	29. Indian and Colonial Government Securities $\frac{1}{4}$ d, Debentures $\frac{1}{16}$ th.
376,106	45,809	85,379	526,353	29. Shares $\frac{1}{4}$ th, Loans on Policies $\frac{1}{16}$ th, Loans on Per. Securities $\frac{1}{16}$ th.
54,100	47,037	6,258	408,616	29. Debentures about $\frac{1}{4}$, Shares about $\frac{1}{4}$ th. Ind. and Colonial Government Securities $\frac{1}{4}$ th.
488,196	95,000	419,699	222,758	29. Indian and Colonial Government Sec. above $\frac{1}{4}$ d, Cash $\frac{1}{4}$ th, Loans on Per. Securities $\frac{1}{4}$ th, Shares $\frac{1}{4}$ th.
21,981	10,467	15,798	112,440	29. Indian and Colonial Government Sec. above $\frac{1}{4}$ th, Loans on Per. Securities under $\frac{1}{4}$ th, Cash $\frac{1}{4}$ th, Agents' Balances $\frac{1}{4}$ th.
377,947	24,394	290,400	173,520	29. Shares $\frac{1}{4}$ d, Agents' Balances $\frac{1}{4}$ th, Cash $\frac{1}{4}$ th, Indian and Colonial Gov. Sec. $\frac{1}{4}$ th.
45,114,886	3,670,859	18,549,490	46,967,698	

* Nos. in General Directory parallel here.

254 GENERAL DIRECTORY OF LIFE ASSURANCE OFFICES.

APPENDIX TO GENERAL DIRECTORY Extracted solely from Return to Board of Trade, under "Life *Ordered by The House of Commons*

II. MUTUAL

OFFICES.	7.* Amount of Life and Annuity Funds.	8. Amount of other Liabilities.	10. Date to which Account brought down.	26. Invested on Mortgage.
	£	£		£
British Empire, . . .	1,060,850	19,267	31 Dec. 1885.	491,146
Clergy Mutual, . . .	3,372,318	62,278	31 May 1886.	1,535,442
Economic, . . .	3,550,863	99,428	31 Dec. 1885.	928,250
Equitable, . . .	4,289,041	56,391	31 Dec. 1885.	2,745,346
Friends' Provident, . .	1,810,980	13,736	20 Nov. 1886.	823,712
Hand-in-Hand, . . .	2,166,346	38,048	31 Dec. 1885.	1,173,108
London Life, . . .	3,926,420	55,575	30 June 1886.	1,337,454
Marine and General, . .	448,975	4,557	31 Dec. 1885.	43,680
Metropolitan, . . .	1,795,274	5,230	31 Dec. 1885.	308,450
Mutual, . . .	1,139,601	11,443	31 Dec. 1885.	605,232
National Life, . . .	812,782	4,070	31 Dec. 1885.	581,821
National Provident, . .	4,183,070	113,196	20 Nov. 1885.	2,512,279
Norwich Union Life, . .	1,894,290	69,710	31 Dec. 1885.	1,293,140
Provident Clerks, . . .	1,320,813	14,408	31 Dec. 1885.	331,020
Carry forward, . . .	31,771,623	567,337		14,710,075

* Nos. in General Directory parallel here.

OF LIFE ASSURANCE OFFICES.

Assurance Companies Act, 1870," during Year 1886.

to be Printed, 1st March 1887.

OFFICES.

27.* Invested on Govern- ment Security.	28. Invested in Loans on Rates, and on Lands, Houses, and Ground Rents.	29. Invested otherwise than under Nos. 26, 27, 28.	NOTES.
£ 10,220	£ 136,624	£ 442,127	No. 29. Invested in Indian and Col. Gov. Sec. above $\frac{3}{4}$ ths, in Loans on Policies about $\frac{1}{4}$ th, in Shares about $\frac{1}{4}$ th, Agents' Balances about $\frac{1}{4}$ th, Rest, Personal Security, For. Gov. Sec., Cash, &c.
...	1,094,325	804,829	29. Debentures above $\frac{3}{4}$ ths, Loans on Policies above $\frac{1}{4}$ d, Life Interests and Reversions above $\frac{1}{4}$ th.
50,156	1,601,055	1,070,830	29. Indian and Colonial Gov. Securities about $\frac{1}{4}$ d, Debentures about $\frac{1}{4}$ th, Loans on Policies above $\frac{1}{4}$ th, Rest, Cash, Life Interests, &c.
331,350	266,530	1,002,206	29. Debentures about $\frac{3}{4}$ ths, Indian and Colonial Government Sec. above $\frac{1}{4}$ th, Loans on Policies above $\frac{1}{4}$ th, Rest, Shares, Cash, &c. above $\frac{1}{4}$ th.
...	725,051	275,953	29. Loans on Policies about $\frac{3}{4}$ ths, Debentures above $\frac{1}{4}$ th, Cash, &c. above $\frac{1}{4}$ th, Outstanding Interest less than $\frac{1}{4}$ th.
14,493	55,906	960,892	29. Debentures about $\frac{1}{4}$, Indian and Colonial Gov. Securities $\frac{1}{4}$ th, For. Gov. Sec. above $\frac{1}{4}$ th, Loans on Policies about $\frac{1}{4}$ th, Rest, Life Interests, &c.
219,525	1,814,686	610,330	29. Loans on Policies above $\frac{1}{4}$, Indian and Colonial Gov. Sec. above $\frac{1}{4}$ th, Debentures about $\frac{1}{4}$ th, Outstanding Interest and Cash above $\frac{1}{4}$ th.
13,685	...	396,167	29. Debentures above $\frac{1}{4}$ d, Indian and Colonial Gov. Sec. above $\frac{1}{4}$ th, Shares above $\frac{1}{4}$ th, Cash, &c. above $\frac{1}{4}$ th, Life Interests above $\frac{1}{4}$ th, Remaining $\frac{1}{4}$ th, Loans on Policies, &c.
60,000	1,184,904	297,150	29. Loans on Policies about $\frac{1}{4}$, Shares above $\frac{1}{4}$ th, Indian and Colonial Gov. Sec. above $\frac{1}{4}$ th, Debentures about $\frac{1}{4}$ th, Rest, Outstanding Interest, and Cash.
22,850	315,753	207,209	29. Loans on Policies about $\frac{1}{4}$, Shares above $\frac{1}{4}$ th, Life Interests above $\frac{1}{4}$ th, Cash above $\frac{1}{4}$ th, Rest, Agents' Bal., and Outstanding Int. above $\frac{1}{4}$ th.
16,221	48,479	170,331	29. Loans on Policies above $\frac{1}{4}$ d, Life Interests $\frac{1}{4}$ d, Debentures above $\frac{1}{4}$ th, Rest, Cash, Outstanding Interest, &c. about $\frac{1}{4}$ th.
...	965,887	818,100	29. Loans on Policies about $\frac{1}{4}$, Indian and Colonial Gov. Sec. $\frac{3}{4}$ ths, Cash, &c. about $\frac{1}{4}$ th 8. Reserve Funds $\frac{3}{4}$ ths.
299,809	123,875	247,176	29. Life Interests about $\frac{1}{4}$ d, Loans on Policies above $\frac{1}{4}$ d, Agents' Balances about $\frac{1}{4}$ th, Rest, Cash, Outstanding Interest, &c. about $\frac{1}{4}$ th
30,056	320,114	654,031	29. Shares about $\frac{3}{4}$ ths, Loans on Policies above $\frac{1}{4}$ th, Debentures above $\frac{1}{4}$ th, Indian and Colonial Gov. Sec. about $\frac{1}{4}$ th, Rest, Outstanding Int., Agents' Balances, &c. about $\frac{1}{4}$ th.
1,068,865	8,608,189	7,957,331	

* Nos. in General Directory parallel here.

256 GENERAL DIRECTORY OF LIFE ASSURANCE OFFICES.

APPENDIX TO GENERAL DIRECTORY OF

II. MUTUAL

OFFICES.	7.* Amount of Life and Annuity Funds.	8. Amount of other Liabilities.	10. Date to which Account brought down.	26. Invested on Mortgage.
Brought forward, . . .	£ 31,771,623	£ 567,337		£ 14,710,075
Reliance,	629,196	23,884	31 Dec. 1885.	253,388
Scottish Amicable, . . .	2,652,968	51,335	31 Dec. 1885.	971,795
Scottish Equitable, . . .	2,850,884	140,553	1 March 1886.	1,876,689
Scottish Provident, . . .	5,386,915	67,030	31 Dec. 1885.	3,672,556
Scottish Widows' Fund, . .	8,871,702	257,090	31 Dec. 1885.	6,735,708
United Kingdom Temperance and General,	3,817,338	50,220	31 Dec. 1885.	1,225,873
Total,	55,980,626	1,157,449		29,446,084

* Nos. in General Directory parallel here.

LIFE ASSURANCE OFFICES—*continued*.

OFFICES.

27.* Invested on Govern- ment Security.	28. Invested in Loans on Rates, and on Lands, Houses, and Ground Rents.	29. Invested otherwise than under Nos. 26, 27, 28.	NOTES.
£ 1,068,365 22,886	£ 8,608,189 34,527	£ 7,957,331 342,279	No. 29. Life Interests and Reversions above $\frac{1}{10}$ th, Loans on Policies $\frac{1}{10}$ th, Loans on Personal Security about $\frac{1}{10}$ th, Rest, Cash, Agents' Balances, &c. about $\frac{1}{10}$ th.
...	575,549	1,156,959	29. Shares above $\frac{1}{10}$ th, Loans on Policies about $\frac{1}{10}$ th, Debentures about $\frac{1}{10}$ th, Indian and Colonial Gov. Sec. above $\frac{1}{10}$ th, Rest, Cash, Outstanding Interest, Agents' Balances, &c. above $\frac{1}{10}$ th.
77,040	357,619	660,089	29. Loans on Policies above $\frac{1}{10}$ th, Life Interests and Reversions about $\frac{1}{10}$ th, Agents' Balances above $\frac{1}{10}$ th, Debentures above $\frac{1}{10}$ th, Indian and Colonial Gov. Sec. about $\frac{1}{10}$ th, Rest, Outstanding Int., &c.
...	326,150	1,455,239	29. Shares about $\frac{1}{10}$ th, Loans on Policies under $\frac{1}{10}$ th, Cash, Stamps, &c. above $\frac{1}{10}$ th, Debentures about $\frac{1}{10}$ th, Agents' Balances about $\frac{1}{10}$ th, Life Int. and Loans on Personal Security about $\frac{1}{10}$ th.
...	855,142	1,537,942	29. Loans on Policies under $\frac{1}{10}$ th, Indian and Colonial Gov. Sec. about $\frac{1}{10}$ th, Agents' Balances about $\frac{1}{10}$ th, Debentures about $\frac{1}{10}$ th, Outstanding Interest and Cash, Stamps, &c. about $\frac{1}{10}$ th.
19,929	1,598,763	1,022,993	29. Shares above $\frac{1}{10}$ th, Loans on Policies under $\frac{1}{10}$ th, Debentures under $\frac{1}{10}$ th, Indian and Colonial Gov. Sec. under $\frac{1}{10}$ th, Rest, Outstanding Interest, Cash, &c. above $\frac{1}{10}$ th.
1,188,220	12,350,989	14,152,832	

* Nos. in General Directory parallel here.

SUMMARY OF RESULTS OF APPENDIX TO GENERAL DIRECTORY OF LIFE OFFICES.

LIABILITIES.		ASSETS.	
1. MIXED OFFICES.			
*4. Capital paid up,	£11,062,751	26. Mortgages,	£45,114,886
7. Life and Annuity Funds,	84,475,337	27. British Government Securities,	3,670,839
8. Other Funds,	4,434,157	28. Loans on Rates, and on Lands, Houses, and Ground	18,549,490
9. Fire Funds (of Companies Transacting Life Business),	13,724,514	Rents	46,967,698
14. Marine Funds (of do.),	606,169	29. Invested otherwise,	£ 114,302,92
	£114,302,928		
2. MUTUAL OFFICES.			
7. Life and Annuity Funds,	£55,980,626	26. Mortgages,	£29,446,064
8. Other Funds,	1,157,449	27. British Government Securities,	1,188,220
		28. Loans on Rates, and on Lands, Houses, and Ground Rents,	12,350,939
		29. Invested otherwise,	14,152,832
			57,138,075
			£171,441,003
Companies, &c., left out in General Directory and Appendix—			
Argus,	£423,768		
Blue Ribbon,	36,550		
Briton (Limited),	62,813		
Briton, Medical, and General,	354,061		
Customs' Fund,	618,493		
Itinerant Methodists,	340,078		
Law Property,	44,359		
London Annuity,	56,006		
Methodist and General,	1,310		
National Guardian,	52,353		
Preserver,	12,887		
Royal Farmers and General,	336,203		
Sovereign,	569,618		
Victoria (Limited),	39,447		
Wes'eyan and General,	184,125		
Western Counties and London,	54,452		
	3,192,523		3,192,523
			£174,633,526
Ordinary Companies, Summary Blue Book, 1887, p. 376, £174,633,526			

* Nos. in General Directory parallel here.

1870," during Year 1886—Ordered by The House of Commons to be Printed, 1st March 1887.

III.—COLONIAL AND AMERICAN OFFICES TRANSACTING BUSINESS IN GREAT BRITAIN.

OFFICES.	7.* Amount of Life and Annuity Funds.	8. Amount of other Liabilities.	10. Date to which Account brought down.	26. Invested on Mortgage.	27. Invested on Govern- ment Security.	28. Invested in Loans on Rates, and on Lands, House, and Ground Rents.	29. Invested otherwise than under Nos. 26, 27, 28.	NOTES.
Colonial Mutual,	£ 566,074	£ 7,173	£ March 1886.	£ 218 803	£ ...	£ 202,156	£ 152,288	This office's statement not yet included in Return-Life Assurance, in consequence of its recent establishment of Branch in Great Britain and Ireland. No. 8. Includes Shareholders' Capital paid up. £20,883, 6s. 8d. 27. Is United States Bonds. 29. Bonds, Railway about £, States and Municipal £th, Railway Stock about £th, Merchant Transport Company Stocks £th, Telegraph Bonds and Stocks £th, Loans on United States, Municipal, and other Bonds about £th, Loans on Policies under £th, Agents' Balances under £th, Outstanding Interest, Rents, and Premiums under £th, Cash on Deposit at Int. about £th, Cash in hand £th.
Equitable of United States,	13,771,558	93,731	31 Dec. 1885.	3,455,904	555,552	2,628,348	7,225,465	
New York Life,	13,666,466	91,625	31 Dec. 1885.	3,736,523	196,550	1,410,603	8,414,415	

* Nos. in General Directory parallel here.

APPENDIX TO GENERAL DIRECTORY OF LIFE ASSURANCE OFFICES.

III.—COLONIAL AND AMERICAN OFFICES TRANSACTING BUSINESS IN GREAT BRITAIN—continued.

OFFICES.	7.* Amount of Life and Annuity Funds.	8. Amount of other Liabilities.	10. Date to which Account brought down.	26. Invested on Mortgage.	27. Invested on Govern- ment Security.	28. Invested in Loans on Rates, and on Lands, Houses, and Ground Rents.	29. Invested otherwise than under Nos. 26, 27, 28.	NOTE.
Mutual Life of New York,	£ 23,787,000	£ ...	31 Dec. 1893.	£ 10,441,447	£ 8,764,925	£ 2,206,517	£ 2,375,020	This office's statement not yet included in Return-Life Assurance Companies, in consequence of its recent establish- ment of Branch in Great Britain and Ireland. 27. Is United States and other Bonds. 29. Is Loans on Col- laterals above £. Cash in Banks and Trust Companies above £th, Pre- miums Deferred and in Transit about £th, Interest accrued about £th.

* Nos. in General Directory parallel here.

ALLIANCE ASSURANCE COMPANY.

CHIEF OFFICES—BARTHOLOMEW LANE, LONDON.

DIRECTORS.

Chairman—The Right Hon. LORD ROTHSCHILD.

JAMES ALEXANDER, Esq.	Right Hon. G. J. GOSCHEN, M.P.
CHARLES GEORGE BARNETT, Esq.	RICHARD HOARE, Esq.
CHARLES EDWARD BARNETT, Esq.	FRANCIS ALFRED LUCAS, Esq.
FRANCIS WILLIAM BUXTON, Esq.	E. H. LUSHINGTON, Esq.
LORD EDWARD CAVENDISH, M.P.	HUGH COLIN SMITH, Esq.
JAMES FLETCHER, Esq.	Right Hon. Lord STALBRIDGE.
CYRIL FLOWER, Esq., M.P.	Sir C. RIVERS WILSON, K.C.M.G., C.B.
<i>Chief Secretary</i> —ROBERT LEWIS.	<i>Assistant Secretary</i> —D. MIRYLEES.
<i>Actuary</i> —M. N. ADLER.	<i>Bankers</i> —LLOYDS, BARNETTS, & BOSANQUETS BANK, Ltd.

LIFE DEPARTMENT.

IN the selection of an Office in which to effect Life Assurances, the important points for consideration are;—

I.—Security. II.—The Rates of Premium Charged.

III.—The Conditions of Assurance.

IV.—The Profits to the Assured under Participating Policies.

It is claimed by the Alliance that its large Capital, the amount of its Reserves, and the character of its Investments, afford Security of a very high order.

The Rates of Premium will be found moderate, and the Conditions of Assurance most favourable to the Assured.

FIRE DEPARTMENT.

THE RATES OF PREMIUM charged by the Company will be found moderate, ranging from a minimum of 1s. 6d. per cent. per annum.

EQUITY AND LAW LIFE ASSURANCE SOCIETY,

18 LINCOLN'S INN FIELDS, LONDON, W.C.

Capital, One Million, Fully Subscribed.

Chairman—JOHN M. CLABON, Esq.

Deputy-Chairman—HENRY FOX BRISTOWE, Esq., Q.C.,

Vice-Chancellor of the Duchy of Lancaster.

Premium Income, £148,995. Assets, £2,062,597.
Expenses of Management, £10,260.

LIFE ASSURANCE—AN INVESTMENT.—An Endowment Assurance, *i.e.*, one payable at a fixed age, say 60, or earlier in the event of death, combines the advantage of a safe investment for annual savings with the protection of immediate assurance.

SPECIMEN OF BONUS ADDITIONS

to Whole Life Policies of £1000, made up to 31st December 1884.

Age at Entry.	NUMBER OF PREMIUMS PAID.				
	5	10	20	30	40
20	£103	£191 10	£481 0	£736 0	£1022 0
30	112	211 0	464 10	819 0	1167 0
40	124	232 0	525 10	939 10	1343 10
50	147	276 10	626 10	1126 0	—

EXAMPLE.—A Policy for £1000, effected 30 years ago by a person then aged 30, would have been increased to £1819, or by more than 80 per cent.

G. W. BERRIDGE, *Actuary and Secretary.*

ATLAS ASSURANCE COMPANY.

FIRE. LIFE. ACCIDENT.

Established 1808.

CAPITAL, £1,200,000.

Head Office, London, 92 Cheapside, E.C.

Chairman—SIR WILLIAM J. W. BAYNES, BART.

Deputy-Chairman—CHARLES ANDREW PRESCOTT, Esq.

Bankers.

MESSRS PRESCOTT, CAVE, BUXTON, LODER, & CO.

Secretary—SAMUEL J. PIPKIN. *Actuary*—GEORGE KING.

The Funds of the Company are exceptionally large in proportion to its Liabilities.

Total Investments (all in Britain), £1,729,174

(Exclusive of Value of Company's Freehold Office, 92 Cheapside).

LIFE DEPARTMENT.

THE RATES OF PREMIUM have recently been *revised*, and *new liberal conditions introduced*. *Payment of Claims Eight days after proof of Death and Title.*

NON-FORFEITURE OF POLICIES SO LONG AS THEY POSSESS A SURRENDER VALUE EQUAL TO ARREARS OF PREMIUM AND INTEREST.

ATLAS WHOLE-WORLD POLICIES, allowing the Assured to reside in any part of the world without extra premium, except in very special cases.

ACCIDENT DEPARTMENT.

AN ANNUAL PREMIUM OF £3 WILL SECURE—

£1000 at Death, or on the Loss of Two Limbs, or the Total Loss of Sight. £333 on the Loss of One Limb. £6 per week during Total Disablement.

PREMIUMS ARE REDUCED, if no Claim has arisen, at Third Year, $7\frac{1}{2}$ per cent. ; at Fifth Year and thereafter, 10 per cent.

FIRE DEPARTMENT.

LOSSES OCCASIONED BY LIGHTNING will be paid whether the property be set on fire or not.

LOSS OR DAMAGE caused by Explosion of Coal Gas in any building assured will be made good.

SEVEN YEARS' POLICIES granted on payment of Six Years Premiums.

SAML. J. PIPKIN, *Secretary*.

BRITISH EMPIRE MUTUAL LIFE ASSURANCE CO.,

NEW BRIDGE STREET, LONDON, E.C.

*Incorporated in the year 1847, under Act 7 and 8 Vict. cap. 110, and
further empowered by Special Act, 15 Vict. cap. 53.*

DIRECTORS.

JOHN RUNTZ, Esq., F.A.S., F.S.S., *Chairman.*

J. H. TROUNCER, M.D. Lond., *Deputy-Chairman.*

EDWIN BOWLEY, F.I.A., F.S.S., *Secretary.*

This Company being established on the **Mutual Principle**, all Surplus Funds belong to the Members.

The average Cash Bonus (Triennially) exceeds 20 per cent. on the Premiums paid.

The Surplus Funds already appropriated exceed **One Million Sterling.**

It has an **ANNUAL INCOME** exceeding **Two Hundred and Ten Thousand Pounds.**

An **ACCUMULATED FUND**, arising solely from premiums, exceeding **One Million One Hundred and Twenty Thousand Pounds.**

Policies **absolutely indisputable** after five years, provided the age of the Assured has been admitted.

Policies kept in force when requested by appropriating the Surrender Value to the payment of premiums.

No charge for voyage to, or residence in, any part of the world, except unhealthy climates.

Assurers under the **TEMPERANCE SCHEME** are placed in a separate Section.

Balance Sheet and Board of Trade Returns, &c., can be obtained on application to—

EDWIN BOWLEY, *Secretary.*

BRITISH EQUITABLE ASSURANCE CO.,

4 Queen Street Place, E.C.

CAPITAL—A QUARTER OF A MILLION STERLING.

DIRECTORS.

William Macdonald Basden, Esq., Great St Helens, Bishopsgate Street, City, and Lloyds.
 James Clarke, Esq., Fleet Street, City.
 William Sutton Gover, Esq., Casino House, Herne Hill, and 4 Queen Street Place, City.
 John Middleton Hare, Esq., Stoke Newington.
 Fountain John Hartley, Esq., Clapton.
 William George Lemon, Esq., Lincoln's Inn.
 William Smith, Esq., Upper Norwood.
 Edward Bean Underhill, Esq., LL.D., Hampstead.

AUDITORS.

Alfred Henry Baynes, Esq., Wandsworth.
 William Potter Olney, Esq., New Kent Road.
 Rev. Lewis Borrett White, D.D., Rector of St Mary Aldermary, Queen Street, City.

SOLICITORS.

Messrs Henry Gover & Son, 8 Adelaide Place, London Bridge.

BANKERS.

The London and Westminster Bank, Lothbury.

MANAGING DIRECTOR AND ACTUARY.

William Sutton Gover, Esq., F.S.S., F.I.A.

ASSISTANT ACTUARY.

Frederic Field Gover, Esq.

SUB-MANAGER.

John Wilkinson Fairey, Esq.

THIRTY-FIRST ANNUAL REPORT, MAY 1886.

New Business.

1,972 Policies issued for	£402,862
New Premium Income	11,824

Business in Force.

27,768 Policies, assuring	5,215,566
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Revenue of the Year.

Premiums	£152,086	
Interest, &c.	48,107	
		195,143

Accumulated Fund.

Laid by in the year	72,458
Accumulated Fund on 31st January 1886	1,088,415

Claims and Bonuses paid under Company's Policies	946,840
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Average Reversionary Bonus for 30 years, about $1\frac{1}{4}$ per cent. per annum.

CALEDONIAN INSURANCE COMPANY.

Founded in 1806 for Fire Business.

Life Department added in 1833.

Funds exceed £1,114,000. Income exceeds £250,000.
Claims paid amount to over TWO MILLIONS STERLING.

FIRE INSURANCES are granted on the most favourable terms, the rates of premium being strictly moderate, and the proportionate amount of Reserve Funds being greatly higher than in the case of most other Offices, thus affording exceptionally complete security.

LIFE ASSURANCES are granted on a **Complete Non-Forfeitable System**, one of the greatest improvements ever introduced into Life Assurance business, by which the Policyholders are protected against the loss of a valuable Policy through accidental omission to pay the premium. **Economical Rates of Premium.** BONUSES MAY BE APPLIED TO MAKE THE ASSURANCE PAYABLE DURING LIFE. **Security unsurpassed.** Life Funds separately invested and entirely exempt from liability for the Fire Business.

D. DEUCHAR, *Manager and Actuary.*

HEAD OFFICE—

19 GEORGE STREET, EDINBURGH.

Established 1840.

CHURCH OF ENGLAND
LIFE AND FIRE ASSURANCE INSTITUTION,
9 & 10 KING STREET, CHEAPSIDE, LONDON.

Empowered by Special Act of Parliament—4 & 5 Vict. cap. 92.

SUBSCRIBED CAPITAL, £1,000,000.

Directors.

Chairman—WILLIAM EMMENS, Esq.

JOSEPH BROOME, Esq.
JOHN R. ENGLEDEUE, Esq.
LOUIS FORBES, Esq.
The Rev. J. HARWARD J. HANDCOCK.
Col. THOMAS E. L. HIGGINSON.

RICHARD NUGENT, Esq.
The Rev. A. DALGARNO ROBINSON, M.A.
W. F. SKENE, Esq., W.S., LL.D., D.C.L.
HERBERT TAYLOR, Esq.
JOHN R. TINDALE, Esq.

ASSURANCES granted on the lives and property of the general public upon very favourable terms and conditions.

LIFE DEPARTMENT.

The *entire* Profits of the Mutual Branch are divided amongst the Assured, who enjoy, in addition, the protection of the Proprietary Capital.

The Rates of Premium in the Non-participating Branch are reduced to the lowest point compatible with perfect security.

Sums assured are made *payable during life*, so as to constitute a *provision for old age*, as well as against premature death.

"Free" Policies are issued, which can *never entirely lapse* through non-payment of Premiums.

FIRE DEPARTMENT.

Premiums for Assurances against FIRE are charged at the usual moderate rates.

The Policies of this Institution now extend to cover Loss or Damage occasioned by Lightning, whether the Property insured be set on fire thereby or not.

Prospectuses, Forms of Proposal, and every information may be obtained of

H. M. BAKER, *Secretary.*

* * SPECIAL ALLOWANCES made from the Proprietors' Fund in aid of Premiums on both Life and Fire Assurances effected by Clergymen and Ministers, and Members of the Scholastic Profession.

CLERGY MUTUAL ASSURANCE SOCIETY.

Established 57 Years.

Offices—1 & 2 THE SANCTUARY, WESTMINSTER, S.W.

Patrons—{ His Grace The ARCHBISHOP OF CANTERBURY.
His Grace The ARCHBISHOP OF YORK.
President—The Right Hon. and Right Rev. The LORD BISHOP OF LONDON.
Vice-President—The LORD HARRIS.
Chairman—The Very Rev. The DEAN OF WESTMINSTER.
Deputy-Chairman—The Hon. EDWARD W. DOUGLAS.
Physician—Dr STONE. *Actuary*—FRANK B. WYATT, Esq.
Secretary—MATTHEW HODGSON, Esq.

OPEN to the CLERGY and their LAY RELATIVES,

AS FOLLOW:—

1. Any Clergyman of the respective Churches of England and Ireland, or of the Protestant Episcopal Church in Scotland.
2. Any Wife, Widow, Child or Grandchild, or any Father, Mother, Brother, Sister, Uncle, Aunt, Nephew or Niece of any such Clergyman.
3. Any Father, Mother, Brother, Sister, Uncle, Aunt, Nephew or Niece of the Wife or Widow of any such Clergyman.
4. The Wife or Widow of any Son, or the Husband or Widower of any Daughter of any such Clergyman.
5. Any Director or other Person holding any office in the Society.

Any person not thus qualified may effect an Assurance upon Life, provided that the person upon whose life such Assurance is to be made is himself qualified.

Extract from the Report of the Directors submitted to the
Members at the Annual General Meeting, on Thursday,
15th July 1886:—

FINANCIAL INFORMATION.

Accumulated Funds,	£3,378,123
Annual Income,	357,427
Total Amount of Claims upon Death paid during 57 years	2,707,129
Total Amount Assured by 8,844 existing Life Assurances,	7,675,837
The New Assurances effected during the year amounted to,	287,620
Yielding an Annual Premium Income of	8,931
The Amount added to the Society's Accumulated Fund during the year was	105,547
Total Bonuses divided	2,105,812

The Society offers the following advantages—

1. Absolute Security.
2. Economy of Management; no Agents being employed or Commission paid.
3. Low Rates of Premium and Liberal Surrender Values.
4. Claims paid immediately on Proof of Title.
5. No Shareholders; all Profits being the Property of the Assured.
6. The Profit arising from the exceptionally low Rate of Mortality proved beyond doubt to prevail amongst the Clergy.

THE EDINBURGH LIFE ASSURANCE COMPANY, A.D. 1823.

FUNDS (1886) £2,120,000.

INCOME £290,000.

Among the advantages offered by this Company are:—

MODERATE PREMIUMS.—The rates are considerably lower than the average.

EARLY AND INCREASING BONUSES.—Policy-holders participate from the outset in the Surplus Funds, receiving an increasing share as they advance in age. The Annual Rate of the Bonuses in 1885 ranged from about £1, 4s. to £6, 10s. and upwards for each £100 assured.

SECURITY.—The Reserves are based on the H^M and H^M(6) Tables at 3½ per cent. interest, the whole Loading (21 per cent. of the premiums) being set aside.

POLICIES PROTECTED FROM LAPSING.—After three years a Policy is not declared void for omission to pay a Premium, but is held in force until the next renewal date. A Free Paid-up Policy may be obtained after Two Premiums; or the time allowed for payment of a Premium may be extended on application.

CLAIMS PAYABLE IMMEDIATELY ON PROOF of Death and Title.

POLICIES INDISPUTABLE AND WORLD-WIDE after Five Years.

Head Office—22 GEORGE STREET, EDINBURGH.

London—11 King William St., E.C.	Dublin—55 Up. Sackville St.
Manchester—12 King Street.	Birmingham—16 Bennet's Hill.
Glasgow—122 St Vincent Street.	Liverpool—40 Castle Street.
Dundee—56 Commercial Street.	Newcastle—4 St. Nicholas Buildings.

EAGLE INSURANCE COMPANY.

ESTABLISHED 1807.

FOR LIVES ONLY.

No. 79 PALL MALL, LONDON, S.W.

DIRECTORS.

Sir GEORGE RUSSELL, Bart., M.P., *Chairman.*
CHARLES BISCHOFF, Esq., *Deputy-Chairman.*

THOMAS ALLEN, Esq.	C. A. LOCKHART ROBERTSON, M.D.,
The Right Hon. Sir WILLIAM HART	F.R.C.P.
DYKE, Bart., M.P.	RALPH LUDLOW LOPES, Esq.
The Right Hon. Sir JAMES FERGUSON,	HENRY PAULL, Esq.
Bart., M.P., G.C.S.I.	HENRY ROSE, Esq.
The Hon. THOMAS F. FREMANTLE.	Colonel the Hon. W. P. TALBOT.

ACTUARY AND SECRETARY.

GEORGE HUMPHREYS, Esq., M.A., F.I.A.

<i>Sums Assured.</i>	£7,500,000
<i>Accumulated Funds</i> (including paid-up Capital of £167,867),	3,000,000
Being just 40 per cent. of the Sums Assured and Bonus.	
<i>Subscribed Capital,</i>	1,500,000
<i>Annual Income,</i>	340,000

The following figures show the progress of the Company :—

- In 1877 the Assurance Fund, invested upon first-class securities, was equal to 32 per cent. of the Sums Assured and Bonus added thereto; and to 11 times the amount of the Annual Premiums payable.
- In 1882 to 36 per cent. of the Sums Assured and Bonus added thereto; and to 13 times the Annual Premiums payable.
- In 1885 to 37 per cent. of the Sums Assured and Bonus added thereto; and to 13 times the Annual Premiums payable.

In June 1877 the amount of Profits declared by the Company was £183,883
In December 1882 218,182

In addition to the Bonus declared periodically, interim Bonuses are given on Policies of five years old and upwards which become claims between any two valuations, thereby practically securing to the Assured an Annual Bonus.

During the past 38 years the Company has paid in Claims £8,141,532
And divided Bonuses amongst the Assured, exclusive of those taken in Reduction of Premium, amounting to 1,077,794

Endowment Assurance—Investment and Insurance combined.

Special attention is called to the very favourable rates of Premium charged by this Company for "Endowment Assurances," under which Class the Sum Assured is payable on attaining a certain age, or at the previous death of the Assured, whichever event may happen first. It will be seen that this class of assurance combines the principle of Investment with that of Life Assurance, and thereby meets a need which is often felt by Insurers. These Policies may be taken out With or Without Profits.

GENERAL ASSURANCE COMPANY.

LIFE—FIRE—ANNUITIES.

Established in the year 1837.

CAPITAL, £1,000,000.

CHIEF OFFICE—103 CANNON STREET, LONDON, E.C.

BOARD OF DIRECTORS.

Sir ANDREW LUSK, Bart.
Principal ANGUS, D.D.
JOS. BOLTON DOE, Esq., J.P.
The Most Hon. The Marquis
of EXETER.

Lt.-Col. F. D. GREY.
GEORGE PITT, Esq.
Lord GILBERT KENNEDY.
JAS. S. MACK, Esq., J.P.

JAS. PILKINGTON, Esq., J.P.
HENRY WM. RIPLEY, Esq.
WILLIAM STRANG, Esq.
Right Hon. C. P. VILLIERS,
M.P.

Secretary and Manager—HENRY WARD, Esq. *Actuary*—ROBERT WILSON, Esq.

Assistant-Secy.—JOHN ROBERT FREEMAN, Esq.

Medical Officers—Sir RISDON BENNETT, M.D., 22 Cavendish Square, London, W.

PHILIP HENRY PYE-SMITH, Esq., M.D., 54 Harley Street, London, W.

The Company undertakes Life Assurance of every kind, at moderate rates, and on terms and conditions which compare favourably with those of other companies.

Policies are made indisputable after five years.

Regulations are in force for securing to the assured the benefit of the surrender value of a policy in the event of its lapse.

Fire Insurances are accepted at tariff rates.

All claims settled with liberality and dispatch.

Prospectuses and Proposal Forms may be obtained on application at the chief office, or any of the branches.

Liberal terms. Prompt settlement of Life and Fire Losses.

Over Two Millions have been paid.

LOANS.

Loans of £100 and upwards, on Mortgage of Freehold and Leasehold Property.

Loans on Personal Security, with Life Assurance.

Loans of £25 and upwards, on Policies of sufficient age and value.

Loans on Reversions and Life Interests.

The usual Commission allowed to the Profession.

HAND-IN-HAND

Fire and Life Insurance Society,

26 New Bridge St., Blackfriars, London, E.C.

Instituted in 1696. Extended to Life Insurance, 1836.

DIRECTORS.

The Hon. LIONEL ASHLEY.
T. PALMER CHAPMAN, Esq.
JOHN LETTSOM ELLIOT, Esq.
Admiral Sir L. G. HEATH, K.C.B.
CHARLES R. GURNEY HOARE, Esq.
ANDREW JOHNSTON, Esq.

C. AUSTEN LEIGH, Esq.
F. LOCKER-LAMPSON, Esq.
T. FULLER MATTLAND, Esq.
ARTHUR SPERLING, Esq.
Right Hon. Lord THURLOW, F.R.S.
W. ESDAILE WINTER, Esq.

The **oldest Insurance Office** in the World.

The **only Mutual Office** in the Kingdom for both **Fire and Life**.

There being **no Shareholders**, all **Profits** are **divided amongst the Insured**.

BONUS RETURNS.

LIFE.—1st Series	75	
2nd Series (according to the age of the Policy)	70 to 75	} per cent. per Annum.
3rd Series Do.	do. 50 rising to 60	
4th Series, after 1st Five Years, to commence at	45	

FIRE (with certain exceptions).—Annual Policies 20 per cent. at the end of each 5th year. Septennial Policies, varying with the nature of the risk, 25 to 50 per cent. at the end of each 7th year.

No Policy-holder is subject to any **Personal Liability**.

The Directors are **willing to appoint as Agents persons of good position and character**.

VALUATION BALANCE SHEET, 31st DECEMBER 1885.

ASSETS.

General Accumulated Fund, Fire and Life,	... £1,646,933	
Life Assurance Fund, under Act of 1870,	... 519,414	
	2,166,346	
Present Value of Life Premiums,	... 1,668,393	
	£3,834,739	

LIABILITIES.

Present Value of Sums insured and Annuities, LIFE,	... £2,380,174	
Sum Reserved for future Abatements on Premiums LIFE,	... 1,021,786	
Sum Reserved for Bonus Returns on unexpired Policies, FIRE,	22,770	
Premiums in hand on account of unexpired terms of Insurance, FIRE,	42,805	
Balance of Assets unappropriated,	367,204	
	£3,834,739	

BENJAMIN BLENKINSOP, *Secretary.*

Imperial Life Insurance Company,

1 OLD BROAD STREET, and 22 PALL MALL,

LONDON.

Established 1820.

Subscribed Capital, £750,000.

Paid-up and Guarantee Fund, £192,000.

Accumulated Funds, £1,300,000.

DIRECTORS.

ASTELL, JOHN HARVEY, Esq., Woodbury Hall, St Neots.
 BARCLAY, CHARLES, Esq., National Provincial Bank of England.
 BARCLAY, THOMAS GEORGE, Esq., Barclay, Perkins, & Co., Brewers.
 BEVAN, FRANCIS AUGUSTUS, Esq., Barclay, Bevan, Tritton, & Co., Bankers.
 BRAND, JAMES, Esq., Harvey, Brand, & Co., Merchants.
 CAVE, CHARLES, Esq., Prescott, Cave, Buxton, Loder, & Co., Bankers.

CHAMBERS, Sir GEORGE HENRY, Thomas Daniel & Co., Merchants.
 FIELD, GEORGE HANBURY, Esq., National Provincial Bank of England.
 HALE, JOHN HAMPTON, Esq., St Andrew's Wharf, Blackfriars.
 LAWRIE, ALEX., Esq., Alex. Lawrie & Co., Merchants.
 ROBERTSON, JAMES R., Esq., 11 Oak Hill Park, Hampstead.
 SMITH, MARTIN RIDLEY, Esq., Smith, Payne, & Smiths, Bankers.

AUDITORS.

BOSANQUET, PERCIVAL, Esq. | HILL, JOHN SHERIFF, Esq.
 PRESCOTT, H. W., Esq.

MANAGER AND ACTUARY.
 JAMES CHISHOLM.

SECRETARY.
 JAMES BUMPUS.

The distinguishing features of this Company comprise—

Fixed Assurance at the Minimum of Cost. This is a new plan introduced by the Company, and provides for the gradual reduction and extinction of premiums.

Immediate Settlement of Claims. Non-Forfeitable Policies.

Guaranteed Surrender Values. Free Travelling all over the World.

Unusually Liberal Conditions of Assurance.

Prospectus post free on application.

THE LANCASHIRE INSURANCE COMPANY.

FIRE AND LIFE.

Established 1852.

HEAD OFFICE.—EXCHANGE STREET, MANCHESTER.

LONDON.—14 KING WILLIAM STREET, E.C.

GLASGOW.—133 WEST GEORGE STREET.

EDINBURGH.—12 YORK BUILDINGS, QUEEN STREET.

INVERNESS.—ACADEMY STREET.

CAPITAL,	.	.	.	.	.	£23,000,000.
FIRE PREMIUMS, 1886,	.	.	.	.	.	£580,778
LIFE PREMIUMS, 1886,	.	.	.	.	.	81,191
INTEREST, 1886,	.	.	.	.	.	50,213
						<u>£712,182</u>
RESERVE FUNDS.						
FIRE AND GENERAL,	.	.	.	.	.	£355,365
LIFE,	.	.	.	.	.	794,585
						<u>£1,079,950</u>

FIRE.—Insurances granted at moderate rates both at home and in foreign countries.

LIFE.—Moderate premiums and liberal conditions as to foreign travel and residence. The Bonus declared at the last Quinquennial Valuation at the end of 1884, was at the rate of £1, 7s. 6d. per cent. per annum.

GEORGE STEWART, F.I.A.,

General Manager and Actuary.

Reversions and Life Interests.

Law Reversionary Interest Society, Ltd.

24 LINCOLN'S INN FIELDS,

LONDON, W.C.

Chairman—EDWARD JAMES BEVIR, Esq., Q.C.

Deputy-Chairman—THE RIGHT HON. HENRY CECIL RAIKES, M.P.

Reversions and Life Interests purchased. Immediate and Deferred Annuities granted in Exchange for Reversionary and Contingent Interests.

Loans may also be obtained on the Security of Reversions.

Annuities, Immediate, Deferred, and Contingent, and also Endowments, granted on favourable terms.

Prospectuses and Forms of Proposal, and all further information, may be had at the Office.

C B. CLABON, *Secretary.*

LIFE ASSOCIATION OF SCOTLAND

Founded 1838—For Life Assurance and Annuities.

*Funds, £3,081,189. Annual Revenue, £474,300.
Claims Paid and Bonuses, £5,500,000.*

CHAIRMAN—

The Right Hon. The **EARL OF STAIR, K.T.**

Chairman at London—

The Right Hon. **SIR LYON PLAYFAIR, K.C.B., M.P.**

THE Systems of Distributing Profits are Specially attractive and beneficial to healthy persons likely to live to at least an average age, *thus* :—

ORDINARY LIFE POLICIES

in Class A₃ are transformed by the application of Profits, at as early a date as possible, into Free Paid-up Policies, requiring no payments or care to keep them in force.

INVESTMENT LIFE POLICIES

in Class B. combine all the advantages of an Ordinary Life Assurance with a most Profitable Investment. The Bonuses are reserved and accumulated for the exclusive benefit of those Assured who survive an average period fixed at entrance. *See the Illustrations of Results in Prospectus.*

There are also Very Low Premiums in Class B₂ for those who prefer the Smallest Present Outlay. The Policies are payable in full, as usual, but the Bonuses are necessarily smaller.

London—5 Lombard Street, E.C., and 123 Pall Mall.

HEAD OFFICE—82 PRINCES STREET, EDINBURGH.

Manager—JOHN TURNBULL SMITH, F.F.A., C.A.

T H E
LIVERPOOL & LONDON & GLOBE
INSURANCE COMPANY,

ESTABLISHED 1836.

FIRE. LIFE. ANNUITIES.

~~~~~  
**HEAD OFFICES.**

**LIVERPOOL: 1 DALE STREET.**

**LONDON: CORNHILL AND CHARING CROSS.**

BRANCH OFFICES.

**MANCHESTER, LEEDS, BRISTOL, DUBLIN, GLASGOW.**

**EDINBURGH, BIRMINGHAM, and NEWCASTLE.**

~~~~~  
FIRE DEPARTMENT.

The Magnitude of the Company's Business enables it to accept Insurances on the most favourable terms.

LIFE DEPARTMENT.

All descriptions of Life Insurance and Annuities at moderate rates. Participating Policies, under new table, payable at fixed age or previous death.

The **Large Reversionary Bonus** of 35s. per cent. per annum on sums assured in the new Participating class has been declared at each valuation.

~~~~~  
**THE NEW CONDITIONS OF ASSURANCE**

**Give increased facilities for Residence, Travel, and Occupation.—**

**Maintaining Policies in force.—Reviving Lapsed Policies.—**

**Prompt Payment of Claims.**

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Prospectuses and Forms of Proposal for Fire and Life Insurance and Annuities may be obtained at the Company's Offices, or from any of its Agents.

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**Applications for Agencies invited.**

# THE LONDON ASSURANCE.

*Incorporated by Royal Charter, A.D. 1720.*

**FOR FIRE, LIFE, AND MARINE ASSURANCES.**

**Head Office—No. 7 ROYAL EXCHANGE, LONDON.**

**West End Office—No. 43a Pall Mall, LONDON.**

**LEWIS ALEXANDER WALLACE, Esq., Governor.**

**GEORGE WILLIAM CAMPBELL, Esq., Sub-Governor.**

**DAVID PLENDERLEATH SELLAR, Esq., Deputy-Governor.**

## Directors.

CHAS. G. ARBUTHNOT, Esq.  
OTTO AUG. BENECKE, Esq.  
ROB. HENRY BENSON, Esq.  
ROBERT BURN BLYTH, Esq.  
WM. THOMAS BRAND, Esq.  
ALF. CLAYTON COLE, Esq.  
GEORGE B. DEWHURST, Esq.  
HENRY LLOYD GIBBS, Esq.

ROBERT GILLESPIE, Esq.  
HOWARD GILLIAT, Esq.  
HENRY GOSCHEN, Esq.  
EDWIN GOWER, Esq.  
A. C. GUTHRIE, Esq.  
ROBERT HENDERSON, Esq.  
LOUIS HUTH, Esq.  
H. J. B. KENDALL, Esq.

GREVILLE H. PALMER, Esq.  
Captain R. W. PELL, R.N.  
HOWARD POTTER, Esq.  
WILLIAM RENNIE, Esq.  
ROBERT RYRIE, Esq.  
ALBERT G. SANDEMAN, Esq.  
Col. LEOPOLD R. SEYMOUR.  
JOHN YOUNG, Esq.

Of the Share Capital the sum of £448,275 has been paid up. The Funds in hand exceed £3,300,000.

Claims under Life Policies are payable at once upon proof of death and title being furnished to the satisfaction of the Court of Directors.

Copies of the Accounts pursuant to "The Life Assurance Companies Act, 1870," can be had on application personally or by letter.

# NATIONAL GUARANTEE

AND

# SURETYSHIP ASSOCIATION, Ltd.

*Established 1863.*

**The only Scotch Company transacting Fidelity  
Guarantee Business alone.**

*Subscribed Capital, £500,000. Invested Funds, £80,000.*

**HEAD OFFICE, 67 GEORGE STREET, EDINBURGH.**

**Securities** for Officers of Government, Banks, Insurance Companies and other Public Offices; Collectors, Travellers, Clerks, and others.

**Bonds** accepted by the Court of Session.

**Cash Bonus** to Policyholders of from 15 to 50 per cent. on Premiums of Policies of three years' standing and upwards.

**Report and Balance-Sheet** annually published.

**GEORGE TODD CHIENE, C.A., Manager.**

# LONDON & LANCASHIRE

Life Assurance Company.

ESTABLISHED 1862.

Head Office—LONDON: 66 and 67 CORNHILL, E.C.

## BOARD OF DIRECTION.

*Chairman*—Colonel KINGSCOTE, C.B.

*Deputy-Chairman*—Alderman Sir THOMAS DAKIN.

Hon. EVELYN ASHLEY.

Sir R. N. FOWLER, Bart., M.P.

VESEY G. M. HOLT, Esq.

H. A. ISAACS, Esq., Alderman & Sheriff.

JOHN J. KINGSFORD, Esq.

JOHN TEMPLETON MORGAN, Esq.

R. BARCLAY REYNOLDS, Esq.

SAMUEL GURNEY SHEPPARD, Esq.

*Manager and Actuary*—WILLIAM PALIN CLIREHUGH.

## PROGRESS OF THE COMPANY

During the past Ten Years to 31st December 1885.

| YEAR. | NEW BUSINESS. |               | NET PREMIUM INCOME. | INVESTED FUNDS. |
|-------|---------------|---------------|---------------------|-----------------|
|       | Sums Assured. | New Premiums. |                     |                 |
| 1875  | £244,720      | £7,769        | £43,866             | £135,537        |
| 1880  | 453,687       | 15,459        | 70,939              | 222,745         |
| 1885  | 582,675       | 21,853        | 117,076             | 422,539         |

## SPECIAL FEATURES.

**Policies indisputable after Five years.**

**Non-Forfeiture of Policies** by granting a proportionate Free Paid-up amount.

**Liberal Surrender Values in Cash or Loans** granted to the extent of such Value.

**Claims** promptly paid without the usual delay of Three Months.

**Distribution of Profits.**—FOUR-FIFTHS, or 80 per cent. of the entire net PROFITS, are apportioned to PARTICIPATING POLICIES every five years.

# Marine and General Mutual Life Assurance Society.

HEAD OFFICE—14 LEADENHALL STREET, LONDON, E.C.  
ESTABLISHED 1852.

## DIRECTORS.

*Chairman*—THOS. SUTHERLAND, Esq., M.P., Chairman of the Peninsular and Oriental Steam Navigation Company.

*Deputy-Chairman*—THOS. ROBERT TUFNELL, Esq., Deputy-Chairman of the Royal Mail Steam Packet Company.

HENRY BAYLEY, Esq., Managing Director of the Peninsular and Oriental Steam Navigation Company.

The Right Hon. HUGH E. C. CHILDERS, M.P., F.R.S.

JOHN ALEXANDER RADCLIFFE, Esq., Director of the West Flanders Railways Company.

Captain SHUTTLEWORTH, Elder Brother of the Trinity House.

JOSEPH HERBERT TRITTON, Esq., Chairman of the General Steam Navigation Company.

JAMES BROWN WESTRAY, Esq. (Messrs M'Diarmid, Greenshields, & Co.).

*Medical Referees*—C. B. RADCLIFFE, Esq., M.D., 25 Cavendish Square, W.

GEO. THIN, Esq., M.D., 22 Queen Anne Street, Cavendish Square, W.

*Bankers*—Messrs BARCLAY, BEVAN, TRITTON, & Co., 54 Lombard Street, London.

*Solicitor*—A. N. RADCLIFFE, Esq., 20 Craven Street, Charing Cross, W.C.

*Auditors*—E. ROBERTS, Esq., JAMES SODEN, Esq.

*Manager and Secretary*—CLAUD G. LAING.

*Actuary*—GERALD H. RYAN.

Life Assurance in all its Branches.

*Every Description of Life Assurance Business transacted upon Ordinary Lives.*

Special facilities offered for the Assurance of the Lives of Captains and Officers engaged in Marine Services.

Moderate Premiums. Immediate Payment of Claims.

Reversionary Bonus for 32 years, upwards of 2 per cent. per annum.

*Passengers' Life Insurance Effected. Policies also issued covering the Effects of Mariners and Passengers by Steam or Sailing Vessels.*

All the Profits Divided among the Life Policyholders.

All Information as to Rates, &c., may be obtained from the Head Office as above.

C. G. LAING,

Manager and Secretary.

# THE MUTUAL LIFE ASSURANCE SOCIETY.

39 KING STREET, CHEAPSIDE,  
LONDON, E.C.

ESTABLISHED 1834.

## DIRECTORS.

GEO. BATTCOCK, Esq., 4 Carlton St., S.W.  
WOODTHORPE BRANDON, Esq., Guildhall,  
E.C.  
JAS. CHARLES, Esq., Southsea House, E.C.  
Sir JULAND DANVERS, K.C.S.I., India  
Office, S.W.  
HENRY DARVILL, Esq., Windsor.  
HERMAN GWINNER, Esq., Winchester  
House, Old Broad Street, E.C.  
BENJAMIN HANNEN, Esq., 258 Gray's Inn  
Road, W.C.  
ANTHONY G. JONES, Esq., J.P., Gloucester.

Sir KINGSMILL GROVE KEY, Bart.,  
Streatham, S.W.  
JOHN WINGFIELD MALCOLM, Esq., M.P.,  
Poltalloch, N.B.  
WM. T. PRITCHARD, Esq., St Michael's  
Buildings, 9 Gracechurch Street, E.C.  
RD. ROTHWELL, Esq., 59 Eastcheap, E.C.  
EDGAR P. STRINGER, Esq., 12 Tregunter  
Road, The Boltons, S.W.  
CHARLES JOHN TODD, Esq., 18 Bread  
Street Hill, E.C.  
Col. E. VILLIERS, 5 Brechin Place, S.W.

Auditors—GEORGE ARTHUR BATTCOCK, Esq.; JAMES CHARLES BOLTON, Esq., F.C.A.;  
BRACKSTONE BAKER, Esq.

Medical Officers—WILLIAM WADHAM, Esq., M.D., 14 Park Lane, W.; THOMAS  
GLOVER LYON, Esq., M.D., 39 King Street, Cheapside, E.C.

Solicitor—WILLIAM BURCHELL, Esq., 5 The Sanctuary, Westminster, S.W.

Actuary—HENRY WILLIAM MANLY, Esq., F.I.A.

Secretary—HUBERT G. ROWSELL, Esq.

## FEATURES OF THIS SOCIETY.

1. The **Premiums** are **moderate**, and, at the younger ages, are small compared with most offices.
2. The Society is **strictly mutual**: the whole of the profits being apportioned among the With-profit Policy-holders.
3. In order that each member shall have his **full share of the profits**, the **Assets and Liabilities** are valued **annually**.
4. Every policy is **unconditionally** and **absolutely** free and **indisputable** after it has been in force five years, and the life assured has attained thirty years of age. No extra for climate or war risk is then payable.
5. **Liberal surrender values** are given to members wishing to retire.
6. Forfeited Policies may be **revived** on payment of arrears of premiums with small fine, at any time before the arrears exceed the surrender value.
7. **Paid-up Policies**—in nearly all cases **exceeding the total amount of Premiums paid**—are granted in lieu of surrender.
8. Every class of Life Assurance business is transacted by the Society.
9. The **Financial position** is **exceedingly strong**: the Society actually possessing over **fourteen years'** premium income in hand.
10. **Claims** are **paid immediately** on proof of death and title.

*Prospectuses, Forms of Proposal, Board of Trade Returns, and every information may be obtained at the Head Office of the Society, 39 KING STREET, CHEAPSIDE, LONDON, E.C., on personal application or by letter.*

**DIVISION OF PROFITS, 1887.**  
**NATIONAL PROVIDENT INSTITUTION.**  
**Founded 1835**  
**FOR MUTUAL LIFE ASSURANCE.**

|                                                                                                               |             |
|---------------------------------------------------------------------------------------------------------------|-------------|
| Accumulated Fund .. .. .                                                                                      | £24,280,000 |
| Claims Paid .. .. .                                                                                           | £26,800,000 |
| Profits declared .. .. .                                                                                      | £28,400,000 |
| <b>ECONOMICAL MANAGEMENT.    LIBERAL CONDITIONS.    LARGE BONUSES.</b><br><b>IMMEDIATE PAYMENT OF CLAIMS.</b> |             |

**PROFITS.**—The **WHOLE** are divided every Five Years amongst the Members without any deduction for Dividends to Shareholders.

For the Five Years ending 20th November 1882, the Surplus was...£614,676 11s. 4d.

There were then 415 Policies in respect of which not only were the Premiums **ENTIRELY EXTINGUISHED**, but also Annuities were granted or Cash Bonuses paid, whilst in the case of many Policies the original sums assured are now **MORE THAN DOUBLED** by the Bonus Additions.

The **NEXT DIVISION** will be made on the 20th November 1887, and all Policies issued previously will participate according to the time they have been in force since the last Division.

Endowment Assurances, payable at any age (or previous death), on exceptionally favourable terms.

**Applications for Agencies invited.**

**48 GRACECHURCH STREET, LONDON.**

*ARTHUR SMITHER, Actuary and Secretary.*

**ROCK LIFE ASSURANCE COMPANY.**

**ESTABLISHED 1806.**

**15 NEW BRIDGE STREET, BLACKFRIARS, LONDON, E.C.**

|                                                        |            |
|--------------------------------------------------------|------------|
| <b>FINANCIAL POSITION.</b>                             |            |
| Total Funds .. .. .                                    | £3,000,283 |
| Total Bonus Additions made to Policies .. .. .         | 3,646,588  |
| Total Profits declared at last Division (1882) .. .. . | 592,076    |
| Annual Income .. .. .                                  | 245,762    |

**INVESTMENT POLICIES.**

|                    |                         |                                                                       |
|--------------------|-------------------------|-----------------------------------------------------------------------|
| A Good Investment. | Non-Forfeiture.         | Very moderate Premiums, which cease after a fixed number of payments. |
| Large Profits.     | Fixed Surrender Values. |                                                                       |
| Absolute Security. | Provision for Old Age.  |                                                                       |

**LIFE ANNUITIES.    EDUCATIONAL ANNUITIES & ENDOWMENTS.**

**INVESTMENT SECURITY POLICIES assuring the  
 repayment of Invested Capital.**

*GEORGE S. CRISFORD, Actuary.*

# North British & Mercantile Insurance Co.

ESTABLISHED 1809.

*Incorporated by Royal Charter and Special Acts of Parliament.*

## RESOURCES of the COMPANY.

*As at 31st December 1885.*

### I. CAPITAL—

|                       |            |   |   |
|-----------------------|------------|---|---|
| Authorised Capital, . | £3,000,000 | 0 | 0 |
| Subscribed Capital, . | 2,500,000  | 0 | 0 |
| Paid-up Capital, .    | 625,000    | 0 | 0 |

### II. FIRE FUND—

|                                              |            |    |   |
|----------------------------------------------|------------|----|---|
| Reserve, . . . . .                           | £1,250,000 | 0  | 0 |
| Premium Reserve, .                           | 382,836    | 18 | 1 |
| Balance of Profit and<br>Loss Account, . . . | 53,621     | 5  | 4 |
|                                              | £1,686,458 | 3  | 5 |

### III. LIFE FUND—

|                                          |            |   |   |
|------------------------------------------|------------|---|---|
| Accumulated Fund<br>(Life Branch), . . . | £3,552,936 | 3 | 3 |
| Accumulated Fund<br>(Annuity Branch), .  | 558,444    | 3 | 9 |
|                                          | £4,111,380 | 7 | 0 |

## REVENUE for the Year 1885.

### From the Life Department.

|                                                                                                 |               |
|-------------------------------------------------------------------------------------------------|---------------|
| Net Life Premiums,                                                                              |               |
| Interest, &c., . . .                                                                            | £520,735 9 2  |
| Annuity Premiums (in-<br>cluding £70,641, 2s. 9d.<br>by single payment),<br>and interest, . . . | 100,518 6 0   |
|                                                                                                 | £621,253 15 2 |

### From the Fire Department.

|                                              |                 |
|----------------------------------------------|-----------------|
| Net Fire Premiums, In-<br>terest, &c., . . . | £1,238,353 9 8  |
|                                              | £1,859,607 4 10 |

*The Accumulated Funds of the Life Department are free from liability in respect of the Fire Department, and in like manner the Accumulated Funds of the Fire Department are free from liability in respect of the Life Department.*

## LIFE DEPARTMENT.

Nine-Tenths of the whole Profits of the Life Assurance Branch are allocated to Participating Policies.

The last Division of Profits was made as at 31st December 1885, when there was declared a Bonus of £1, 9s. 0d. per cent. per annum on the Sums Assured and subsisting Bonus Additions.

Although the Bonus is at the rate of £1, 9s. 0d. per cent. per annum on the Sums Assured by the Policies of this Company effected since last Investigation, it is much higher on Policies of older standing, in consequence of the Bonus being declared not only on the original Sum Assured, but also on all subsisting Bonus Additions.

The Bonus declared in 1881 was £1, 7s. 6d. per cent. per annum.

### IMPORTANT FEATURES.

Claims paid on proof of death and title.

Premiums adjusted to each half-year of age.

Minimum Surrender Values fixed, and held at credit of Insured for five years.

Paid-up Policy of liberal amount granted in place of lapsed Policy, if desired within six months.

Inaccurate statements in proposal papers do not involve forfeiture of Policy, unless accompanied by fraud.

Policies in most cases free of all restrictions as to occupation, residence, and travel.

### ANNUITY BRANCH.

ANNUITIES, Immediate, Contingent, or Deferred, are granted on favourable terms.

## FIRE DEPARTMENT.

Property of nearly every description insured at Home and Abroad at the Lowest Rate of Premium. Losses Promptly and Liberally settled.

*Prospectuses and every information may be had at the Chief Offices, Branches, or Agencies.*

### Chief Offices:—

EDINBURGH—64 PRINCES STREET. LONDON—61 THREADNEEDLE STREET, E.C.



# NEW YORK LIFE INSURANCE COMPANY.

ESTABLISHED 1845.

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*Conducted under the Official Supervision of the Insurance Department of the Government of the State of New York. Reports deposited annually with the Board of Trade in Great Britain, in accordance with the "Life Assurance Companies' Act, 1870."*

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## Trustees for Great Britain and Ireland.

With whom is deposited 250,000 Dollars in United States Bonds (for the protection of all Policy-holders and Annuitants), and 100,000 Dollars in the same Bonds (as additional protection for the representatives of deceased Policy-holders), or equal to over £70,000, in all.

THE RIGHT HON. HUGH C. E. CHILDERS, M.P., F.R.S.

FRED. FRANCIS, Esq., Director London and County Bank.

A. H. PHILLPOTTS, Esq., Director Bank of British North America.

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**LIFE ASSURANCE ONLY. PURELY MUTUAL.  
ALL PROFITS BELONG TO POLICY-HOLDERS, AND  
APPORTIONMENTS ARE MADE ANNUALLY.**

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## SPECIAL FEATURES.

Non-forfeiting Tontine Policies providing an Investment during Lifetime as well as Insurance against Death.

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Annual Bonus Policies.

Annuities granted at Attractive Rates.

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Accumulated Funds, 1st January 1887, over £15,000,000.

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*Chief Office for Great Britain and Ireland:*

76 and 77 CHEAPSIDE, LONDON, E.C.

J. FISHER SMITH, *General Manager.*

# PROVIDENT LIFE OFFICE.

FOUNDED 1806.

50 REGENT STREET, W., & 14 CORNHILL, E.C.,  
LONDON.

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|                              |                |
|------------------------------|----------------|
| EXISTING ASSURANCES exceed   | ... £7,000,000 |
| INVESTED FUNDS, ... ..       | 2,485,955      |
| ANNUAL INCOME, ... ..        | 319,215        |
| CLAIMS AND SURRENDERS exceed | ... 8,000,000  |
| BONUSES DECLARED, ... ..     | 2,629,814      |

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**REVISED CONDITIONS OF ASSURANCE.**—Foreign Residence and Travel.—All Policies already issued and to be issued, after having been Five Years in Force—the Life Assured not being engaged in any Military, Naval, or Seafaring Service, and of the age of Thirty Years—are relieved from all conditions as to Foreign Residence and Travel.

**Suicide Claims.**—In the event of Death by Suicide after a Policy has been Twelve Months in force, the Claim is paid in full. If Death occurs *within* Twelve Months the whole of the Premium paid is refunded.

*This in no way affects the old established rule of the Office to pay Suicide Claims in full under Policies granted to one person on the Life of another, or where the Policies are held by Assignees for a bona fide consideration.*

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**HALF-CREDIT SYSTEM.**—Merchants, Traders, and others, requiring the full use of their Capital, and desiring a Life Policy at the cheapest present outlay, are invited to examine the terms of the Half-Credit System of this Office.

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*Prospectuses and further information to be obtained at the Head Office, or of any of the Agents.*

CHARLES STEVENS, *Actuary and Secretary.*

## Queen Insurance Company.

### CHIEF OFFICES—

QUEEN INSURANCE BUILDINGS, LIVERPOOL, and  
60 GRACECHURCH STREET, LONDON.

The Security offered by the Company is:—

|                                               |                   |
|-----------------------------------------------|-------------------|
| Capital Paid up, ... ..                       | £180,035          |
| Reserves, ... ..                              | 382,146           |
| Life Accumulation Fund, ...                   | 521,013           |
| Annuity Fund, ... ..                          | 18,812            |
| Total Funds in Hand, ... ..                   | £1,188,463        |
| And in addition, the Uncalled Capital, ... .. | 1,620,315         |
| Together, ... ..                              | <u>£2,808,778</u> |

The Company offers to Life Policyholders the following Special Advantages:—

**Free Paid up Policies for all Premiums Received and Bonuses added.**

**Fixed and Specially Liberal Surrender Values.  
Large Bonuses.**

*(The addition to Policies at Last Division was at the rate of £75 per £1000.)*

**New Scheme to prevent Forfeiture of Policies.  
Exceptional Privileges as to Foreign Travel and Residence.  
Policies Indisputable after Five Years in Force.  
Claims Paid immediately on Proof.**

*The Company insures nearly every description of Property against loss or damage by Fire at equitable rates, which can be ascertained on application.*

*Losses promptly and liberally dealt with.*

**The Income of the Company is now £713,398.  
The Company has paid in satisfaction of Claims £5,737,358.**

T. WALTON THOMSON, *General Manager.*

J. K. RUMFORD, *Sub-Manager.*

THOS. J. DAVIDSON, *Resident Secy. in London.*

# ROYAL INSURANCE Co.

Royal Insurance Buildings, Liverpool,  
and Lombard Street, London.

*Extracts from the Report for the Year 1885.*

## FIRE DEPARTMENT.

|                                             |          |    |   |
|---------------------------------------------|----------|----|---|
| Net Premiums, after deducting Re-Assurances | £966,107 | 14 | 6 |
| Net Losses                                  | 552,275  | 19 | 7 |

## LIFE DEPARTMENT.

|                                             |          |    |   |
|---------------------------------------------|----------|----|---|
| Net Premiums, after deducting Re-Assurances | £251,432 | 11 | 6 |
|---------------------------------------------|----------|----|---|

*BONUSES DECLARED at the last Four Divisions of Profits :*

*£1 10s. per cent. per Annum on Sum Assured,  
Upon all Policies entitled to participate.*

## FUNDS.

After providing for payment of the Dividend, the  
Funds of the Company stand as follows :—

|                            |            |    |   |
|----------------------------|------------|----|---|
| Capital Paid-up            | £289,545   | 0  | 0 |
| Fire Fund                  | £550,000   | 0  | 0 |
| Conflagration Fund         | 200,000    | 0  | 0 |
|                            | 750,000    | 0  | 0 |
| Reserve Fund               | 1,100,000  | 0  | 0 |
| Balance of Profit and Loss | 214,470    | 17 | 5 |
| Life Funds                 | 3,148,885  | 12 | 8 |
|                            | £5,502,901 | 10 | 1 |

## GROWTH OF FUNDS.

|      |            |    |   |
|------|------------|----|---|
| 1870 | £1,924,042 | 3  | 5 |
| 1875 | 3,258,437  | 10 | 9 |
| 1880 | 4,528,542  | 11 | 9 |
| 1885 | 5,502,901  | 10 | 1 |

## EXTRACT FROM AUDITORS' REPORT.

"We have examined and counted every Security, and have found all correct and in perfect order, and that the present aggregate Market value thereof is in excess of the amounts in the said Balance Sheets."

JOHN H. M'LAREN, *Manager.*  
DIGBY JOHNSON, *Sub-Manager.*  
JOHN H. CROFT, *Secretary in London.*

## Royal Exchange Assurance Corporation,

(Established by Royal Charter, A.D. 1720).

**FOR SEA, FIRE, LIFE, AND ANNUITIES.**

Chief Office—ROYAL EXCHANGE, LONDON; Branch—29 Pall Mall

The Accumulated Funds exceed £4,000,000.

The Total Claims paid by this Corporation have exceeded  
THIRTY-FOUR MILLIONS Sterling.

### FIRE.

Policies issued free of expense.  
Losses occasioned by Lightning will be paid, whether the property be set on fire or not.  
Loss or Damage caused by Explosion of Coal Gas in any building assured will be made good.

### LIFE.

#### LIBERAL CONDITIONS OF ASSURANCE.

Surrender Values allowed after payment of two annual Premiums.

Paid-up Policies allowed in lieu of Surrender Values.

Extensive Foreign Residence free of charge from the first.

Policies "indisputable" and "world-wide" after 5 years.

Claims paid at once, on proof of death and title, without discount.

A Prospectus, Table of Bonus, and Balance Sheet will be forwarded on application.

E. R. HANDCOCK, Secretary.

## The Scottish Provincial Assurance Company,

Established 1825. Incorporated by Special Act of Parliament 1852.

Capital—£1,000,000. Accumulated Funds—£1,611,339.

Head Office—ABERDEEN.

London Office—64 CANNON STREET, E.C.

### LIFE DEPARTMENT.

THE DIRECTORS have recently revised the whole of the Company's Conditions for Life Assurance, and have granted important Concessions in the following particulars:—

- I.—Revival of Lapsed Policies.
- II.—Surrender Values.
- III.—Extension of Free Limits of Foreign Residence and Travel.
- IV.—Indisputability of Policies.
- V.—Immediate payment of Claims.

#### Surrender of Policies.

Forty per cent. of the ordinary Premiums received upon existing Whole Term Policies, effected by even rates, and which have been not less than Three Years in force, is returned, in the event of its being wished to surrender any of such Policies. The Cash Value of the Vested Bonus, in any of such cases, will also be paid.

### FIRE DEPARTMENT.

Insurances effected at ordinary rates. Losses from Lightning admitted.  
Prospectuses, Forms of Proposal, &c., may be obtained at any of the Offices or Agencies of the Company.

\*\*\* APPLICATIONS FOR AGENCIES INVITED.

EDINBURGH OFFICE—13 St Andrew Square.

# The Scottish Amicable Life Assurance Society.

*Established 1826, and Incorporated by Special Act of Parliament.*

Assurances in Force— | Claims Paid— | Accumulated Funds— | Annual Income—  
£8,000,000. | £3,700,000. | £2,700,000. | £320,000.

The following are Specimens of the Annual Premiums for Assurances of £100:

| CLASS.                                               | AGE NEXT BIRTHDAY. |         |         |        |        |        |        |       |       |  |
|------------------------------------------------------|--------------------|---------|---------|--------|--------|--------|--------|-------|-------|--|
|                                                      | 21                 | 26      | 31      | 36     | 41     | 45     | 50     | 55    | 60    |  |
| With Additions                                       | £ s d              | £ s d   | £ s d   | £ s d  | £ s d  | £ s d  | £ s d  | £ s d | £ s d |  |
| Minimum System                                       | 2 3 0              | 2 7 5   | 2 12 11 | 2 19 8 | 3 8 2  | 3 16 3 | 4 9 1  | 5 5 1 | 6 6 4 |  |
| With Additions—30 payments                           | 1 9 3              | 1 12 10 | 1 17 7  | 2 3 6  | 2 11 4 | 2 18 8 | 3 10 9 | 4 6 4 | 5 7 2 |  |
| Minimum System—30 payments                           | 3 5 0              | 3 10 0  | 3 15 0  | 4 0 0  | 4 10 0 | 4 18 0 | 5 8 0  | 6 2 0 | 7 0 0 |  |
| Endowment Assurances, payable at age 60, or at Death | 2 3 0              | 2 10 0  | 3 0 0   | 3 15 0 | 4 19 0 | 6 9 0  | 10 2 0 | —     | —     |  |

**COMPLETE POLICIES.**—Each Premium paid under Limited Payment Policies and Endowment Assurances secures after a time a proportionate part of the Assurance in the event of discontinuance, as stated in Prospectus, a copy of which may be had on application.

All the Profits belong to the Policyholders.

Claims Paid immediately on Proof of Death and Title.

Head Office—St Vincent Place, Glasgow.

THOMAS MARR, *Manager.*  
WILLIAM G. SPENS, *Secretary.*

LONDON OFFICE—1 Threadneedle Street, E.C.  
LIVERPOOL OFFICE—B9 Liverpool and London Chambers.

DUBLIN OFFICE—50 Lower Sackville Street

BELFAST OFFICE—12 Victoria Street.

# SCOTTISH METROPOLITAN LIFE ASSURANCE COMPANY.

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*Chairman.*

Right Hon. J. H. A. MACDONALD, C.B., M.P.  
*Lord Advocate for Scotland.*

*Manager.*

WM. GIBSON BLOXSOM.

*Secretary.*

W. R. MACDONALD, F.F.A.

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*Premium Rates lower, and Conditions of Assurance  
more liberal than any other Company.*

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CLAIMS PAID ON PROOF OF DEATH.

All Assurances Non-Forfeitable.

WHOLE-WORLD POLICIES FOR MASTER MARINERS.

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HEAD OFFICE.

25 ST ANDREW SQUARE, EDINBURGH.

---

LONDON OFFICE.

79 CORNHILL, E. C.

---

GLASGOW OFFICE.

136 ST VINCENT STREET.

THE CORPORATION OF THE  
**Scottish Provident Institution,**

*Head Office: 6 ST ANDREW SQUARE, EDINBURGH.*

THIS INSTITUTION combines the advantages of  
**Mutual Assurance with Moderate Premiums.**

The PREMIUMS are so moderate that at most ages an Assurance of £1200 or £1250 may be secured from the first for the same yearly payment which would elsewhere assure (with profits) £1000 only.

The Whole PROFITS go to the Policyholders, on a system at once safe and equitable,—no share being given to those by whose early death there is a loss.

The effect of *reserving* the surplus for the survivors (who will, however, comprise more than half the members) has been that—in addition to the above immediate advantage—the older Policies have already received *reversionary Bonuses* of 40 to 70 per cent. and upwards.

**The next Investigation takes place at end of 1887.**

| EXAMPLES of PREMIUMS for £100 at DEATH—with Profits. |         |        |         |         |        |        |
|------------------------------------------------------|---------|--------|---------|---------|--------|--------|
| AGE.                                                 | 25      | 30*    | 35      | 40†     | 45     | 50     |
| During Life, .                                       | £1 18 0 | £2 1 6 | £2 6 10 | £2 14 9 | £3 5 9 | £4 1 7 |
| 21 Payments, .                                       | 2 12 6  | 2 15 4 | 3 0 2   | 3 7 5   | 3 17 6 | 4 12 1 |

\* A person of 30 may secure £1000 at death by a yearly payment, *during life*, of £20, 15s. which would generally elsewhere secure £800 only, instead of £1000. Or he may secure the same sum of £1000 by *twenty-one* yearly payments of £27, 13s. 4d., *being thus free of payment after age 50.*

† At age 40 the Premium *ceasing* at 60 is, for £1000, £33, 14s. 2d., being about the same as most Offices require during the whole term of life. *Before that time the Policy will have shared in at least one Division of Profits.*

The NEW BUSINESS has for many years exceeded a MILLION yearly.

The EXPENSES are much under those of any Office doing so large a new Business.

**THE ACCUMULATED FUND EXCEEDS £5,500,000.**

*Only two Offices (both much older) have as large a Fund.*

THE CONDITIONS OF ASSURANCE ARE EXCEPTIONALLY LIBERAL.

POLICIES are generally now free from restriction on residence *after five years*, and *unchallengeable* on any ground but fraud. They may be revived (after month of grace) on payment of premium within a year without proof of health. In the case of death intervening, when the value exceeds the unpaid premium the full sum is payable, under deduction of arrears.

CLAIMS payable on proper title One Month after proof of death, which is in most cases equivalent to IMMEDIATE payment.

REPORTS with Statements of Principles and Tables of Rates may be had on application.

EDINBURGH, December 1886.

JAMES WATSON, Manager.

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Established 1824.

**CAPITAL, SIX MILLIONS STERLING.**

|                                  |   |   |   |   |             |
|----------------------------------|---|---|---|---|-------------|
| <i>Invested Funds,</i>           | . | . | . | . | £3,300,000. |
| <i>Life Assurances in Force,</i> | . | . | . | . | 11,000,000. |

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# SCOTTISH UNION AND NATIONAL INSURANCE COMPANY.

LONDON.—3 KING WILLIAM STREET, E.C.

GLASGOW.—150 WEST GEORGE STREET.

*Head Office—35 St Andrew Square, Edinburgh.*

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## Directors.

Hon. JAMES W. MONCREIFF.  
JAMES TURNBULL.  
ANDREW THOMSON.  
JAMES TAYLOR.  
T. HECTOR SMITH.  
WILLIAM DICKSON.

A. D. M. BLACK.  
JOHN KENNEDY.  
JOHN M. CRABBE.  
JAMES MANSFIELD.  
JOHN MACKENZIE.  
W. S. DAVIDSON.

*Secretary—J. K. MACDONALD.*

*Assistant-Secretary—H. D. PRAIN.*

*General Manager and Actuary—JOHN M. M'CANDLISH.*

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Under the LIFE INSURANCE SYSTEM of this Company, the Assured obtain *every privilege and advantage* which experience has suggested as possible, added to the *safety* of dealing with a Company of *sixty years' standing*, possessing large ACCUMULATED FUNDS.

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## EARLY BONUS SCHEME (E.B.)

The following among other special advantages apply to ordinary Policies issued under this Scheme. Besides being payable immediately on proof of death and title, they are, *at the end of three years from their date*,

- Entitled to rank for Bonus Additions;
- Indisputable on the ground of Errors or Omissions;
- World-Wide without Extra Charge; and
- Kept in force, wholly or partially, even in case of Non-payment of Premium.

At last Division of Profits, Life Policies under this Scheme received a BONUS ADDITION OF 22 PER CENT. for each year since they began to rank.

## SPECIAL BONUS SCHEME (D.B.)

Under this Scheme PROFIT POLICIES are issued at *Non-Profit Rates*, and share in the Profits when the premiums received, accumulated at 4 per cent. compound interest, amount to the Sum Assured. *Policies issued at these cheap Rates practically receive a large Bonus at the outset.* At age 30, £1200 can be insured for the same Premium as would be charged for £1000 under the usual Profit Schemes of most Offices.

## FIRE INSURANCE.

Almost all descriptions of Property insured on the most favourable conditions.

# SCOTTISH WIDOWS' FUND

## Life Assurance Society.

THE SOCIETY was established in 1815 for the Assurance of Lives upon the Mutual principle, each Member contributing to a common fund in proportion to the benefit to be derived from it, and all Profit arising from the Business being divisible among the Members alone.

THE ACCUMULATED FUND now exceeds Nine Millions and a Quarter Sterling (the largest Life Assurance Fund in the United Kingdom), all invested in Securities of the highest class, and none of them involving any liability. The Annual Revenue from premium and interest considerably exceeds One Million Sterling.

THE LARGE PROFITS REALISED are periodically divided upon a clear and equitable system, the Policies being increased by an annual percentage of Bonus for each annual premium paid from the commencement to date of claim. The Bonuses which have been added to Policies exceed Eight Millions Sterling.

THE BONUSES ARE DECLARED on the Compound System (i.e., on both original Sums Assured and previous Bonuses), the whole Policy being thus productive of profit to the Policyholder. Bonuses may be surrendered for their present value in cash, or applied to the reduction or extinction of premiums.

INTERMEDIATE BONUSES are paid on Claims arising between divisions of profits, an arrangement which secures to Policyholders all the advantages of an annual division on the wider and more reliable basis of Septennial Estimates.

SURRENDER VALUES OR "PAID-UP POLICIES" free of all future premiums, are granted for discontinued Policies. The Laws empower the Directors to make such allowances at any time after payment of one full year's premium. LOANS are granted on Security of Policies within a small margin of their Surrender Value.

EXTENSIVE FOREIGN TRAVEL and Residence is allowed in all cases, and most Policies may be made Whole World or free from all restriction as to residence from the first. Policies become indisputable after five years if age is admitted.

EDINBURGH (HEAD OFFICE): 9 ST ANDREW SQUARE.

LONDON OFFICE—28 CORNHILL, E.C.

|            |                     |                 |                    |
|------------|---------------------|-----------------|--------------------|
| DUBLIN     | 41 WESTMORELAND ST. | BIRMINGHAM      | 12 BENNETT'S HILL. |
| GLASGOW    | 114 WEST GEORGE ST. | LEEDS           | 21 PARK ROW.       |
| MANCHESTER | 21 ALBERT SQUARE.   | BRISTOL         | 40 CORN STREET.    |
| LIVERPOOL  | 48 CASTLE STREET.   | BELFAST         | 2 HIGH STREET.     |
|            | NEWCASTLE-ON-TYNE   | 12 GREY STREET. |                    |

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# The Scottish and New Zealand Investment Company, Limited.

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**CAPITAL, . . . £750,000,**

Divided into 150,000 Shares of £5 each; 120,000 being Ordinary Shares, of which 100,000 have been issued; and 30,000 being Preference Shares, which are issued as applied for.

## SUBSCRIBED CAPITAL.

Ordinary Shares, 100,000 whereon £1 per Share has been paid; Preference Shares, issued up to 30th June 1886, 3400 whereon £5 per Share have been paid.

**RESERVE FUND, . . . £31,000.**

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### Directors:—

THOMAS AITKEN, Esq., Shipowner, 5 Grosvenor Crescent, Edinburgh.

JAMES FORD, Esq., Merchant, 5 Learmonth Terrace, Edinburgh.

CHARLES JAS. HENDERSON, Esq., 6 Drumsheugh Gardens, Edinburgh.

ROBERT LOCKHART, Esq., Manufacturer, 9 Royal Terrace, Edinburgh.

JAMES MUIRHEAD, Esq., Advocate, Sheriff of the Counties of Stirling, Dumbarton, and Clackmannan.

PATRICK STIRLING, Esq., of Kippendavie, Kippenross, Dunblane.

WILLIAM SMITH, Esq., LL.D., 120 Princes Street, Edinburgh.

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**Registered Office—19 York Place, Edinburgh.**

**JOHN SMART, S.S.C., Secretary.**

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This Company accepts Loans of £50 and upwards, on terms which may be learned from the Secretary.

The Loans are amply secured by the uncalled Capital, amounting to £400,000, which is the limit of the Company's borrowing powers.

# THE Standard Life Assurance Company.

ESTABLISHED 1825.

Governor:—

HIS GRACE THE DUKE OF BUCCLEUCH AND QUEENSBERRY, K.T.

Board of Directors in London:—

|                                                                                       |                                                                        |
|---------------------------------------------------------------------------------------|------------------------------------------------------------------------|
| ROBERT ORE CAMPBELL, Esq., Chairman<br>of the National Bank of India.                 | JOHN R. BOYSON, Esq., 26 Inverness<br>Terrace, Hyde Park.              |
| EDMOND K. BAYLEY, Esq., 2 Lancaster<br>Street, Hyde Park, and Rookwood,<br>Roscommon. | J. C. DIMSDALE, Esq., Banker, 50 Corn-<br>hill.                        |
| CHAS. HEMERY, Esq., 28 Threadneedle St.                                               | STEUART MACNAGHTEN, Esq., Chairman<br>of the Southampton Dock Company. |

Manager and Actuary—SPENCER C. THOMSON, B.A. Cantab.

General Secretary for England—HENRY JONES WILLIAMS.

**THE STANDARD** is one of the largest and most influential of British Offices, being established on a wide and popular basis, with connections throughout the whole of the British Dominions.

The business has steadily increased from the commencement, the present position of the Company being as follows:—

|                             |             |
|-----------------------------|-------------|
| SUMS ASSURED, . . . . .     | £20,000,000 |
| ANNUAL REVENUE, . . . . .   | £900,000    |
| ACCUMULATED FUND, . . . . . | £6,500,000  |

Besides the careful management of the whole business by the Directors, the features which above others have contributed to the Company's popularity and success are the *liberality* with which the Directors treat all Policy-holders, and the *readiness* with which they adopt all real improvements which experience suggests in Life Assurance practice.

Among the advantages offered by the **STANDARD COMPANY** are—Moderate Premiums; Free Whole-World Residence; Unchallengeable Policies; Revival of Policies in Arrear on very favourable terms; Surrender Values of Fixed Amount or Fully Paid-up Policies in exchange; Perfect Security; and Early Payment of Claims.

The **SURPLUS FUND** is divided every Five years, and already **FOUR** and **A HALF MILLIONS STERLING** have, as the consequence of careful management, been added to Policies over and above the original sums assured for.

LONDON—88 King William Street, E.C., and  
8 Pall Mall East, S.W.

EDINBURGH—8 and 5 George Street (Head Office).

DUBLIN—66 Upper Sackville Street.

The Medical Officer attends daily at the LONDON OFFICE, 88 King William Street,  
at Half-past One.

## THE COLONIAL MUTUAL LIFE ASSURANCE SOCIETY LIMITED.

OFFICES—33 POULTRY, LONDON, E.C.

### DIRECTORS.

THE RIGHT HON. LORD BRABOURNE, *Chairman*.  
 SIR HENRY BARKLY, K.C.B., G.C.M.G.      ERNEST BAGGALLAY, Esq., M.P.  
 LIEUT.-GEN. SIR ANDREW CLARKE, R.E., G.C.M.G., C.B., C.I.E.  
 T. JACQUES MARTIN, F.S.S., *Managing Director*.  
*Bankers*—MESSRS COUTTS & COMPANY.  
*Consulting Medical Officer*—C. Y. BISS, M.A., M.D., M.R.C.S  
 ADELAIDE, AUCKLAND, BRISBANE, CAPE TOWN, CHRISTCHURCH,  
 DUNEDIN, DURBAN, HOBART, LAUNCESTON, MELBOURNE, SYDNEY,  
 WELLINGTON.

The Annual Income of the Society now exceeds  
 A QUARTER OF A MILLION STERLING.

Amount of New Business for year ending 31st March 1886—£1,161,030.  
 Policies Unconditional, Unchallengeable, Indefeasible, cannot lapse while Surrender  
 Value equals one premium.  
 Voyaging, Travelling, Residence, without restriction or notice.  
 Claims paid immediately on Proof of Death and Title.

*The Directors are prepared to receive applications for Public and Private Agencies  
 on Liberal Terms.*

*Manager*—G. CLAVERING ALDER.

*Secretary*—W. H. HARVEY.

## RELIANCE MUTUAL LIFE ASSURANCE SOCIETY,

71 KING WILLIAM STREET, LONDON, E.C.

*Established 1840.*

### TRUSTEES.

THE RIGHT HON. THE EARL OF LEVEN AND MELVILLE.  
 W. M. TUFNELL, Esq.

### DIRECTORS.

|                                                      |                                                          |
|------------------------------------------------------|----------------------------------------------------------|
| J. T. ABDY, Esq., High Beech, Loughton.              | The Hon. HENRY W. PETRE, Springfield Place.              |
| EDWARD BUTLER, Esq., Kew Gardens, S.W.               | JAMES ROUND, Esq., M.P., 31 De Vere Gardens, Kensington. |
| W. W. DUFFIELD, Esq., Chelmsford.                    | JAMES C. TRAILL, Esq., Castle Hill, Caithness.           |
| THOMAS EYKYN, Esq., Ladbroke Grove, Kensington Park. | W. M. TUFNELL, Esq., Bank, Chelmsford.                   |
| ALEX. HOWDEN, Esq., 188 Leadenhall St.               |                                                          |
| J. OXLEY PARKER, Esq., Bank, Maldon.                 |                                                          |

*Secretary*—HENRY UNWIN, Esq.

This Society is based upon purely Mutual Principles, all the profits belong to the Assured. The Members in General Meeting deal quinquennially with the ascertained surplus of the Society's Funds.

All kinds of Life Assurance may be effected. Loans granted on approved security. Second Class Lives may be assured at the ordinary rate, with an extra charge, to be treated as a debt upon the Policy, which will decrease annually and be extinguished upon the Assured reaching the age expectant on his life at entry.

No Liability whatever can attach to Members beyond the payment of their stipulated Premiums; and every member accepts his Policy with this condition expressed.

## THE MUTUAL LIFE INSURANCE COMPANY OF NEW YORK.

*THE LARGEST LIFE INSURANCE COMPANY IN THE WORLD.*

ESTABLISHED 1842.

RICHARD A. M'CURDY, *President.*

*Home Office—Nassau, Cedar & Liberty Street, New York.*

**INVESTED FUNDS exceed £23,787,000.**

**ANNUAL INCOME exceeds £4,400,000.**

**P**ARTICULAR attention is requested to the following Table, showing the steady increase in the Invested Funds through all the vicissitudes of panics, epidemics, civil war, &c., through which the United States have passed during the lifetime of this Company. It furnishes conclusive evidence of the absolute safety of investments in Life Insurance when skilfully managed in the interest of Policyholders.

### INVESTED FUNDS FROM 1845 to 1887

(Reckoning a period of every 10 years from 1845).

|            |            |                    |             |
|------------|------------|--------------------|-------------|
| 1845 . . . | £20,310    | 1885 . . .         | £21,640,871 |
| 1855 . . . | 539,766    | 1886 . . .         | 22,689,868  |
| 1865 . . . | 2,549,043  | Jan. 1, 1887 . . . | 23,787,909  |
| 1875 . . . | 15,093,119 |                    |             |

### LIFE INSURANCE AND A GOOD INVESTMENT.

Policy No. 41,143; Ten Payments; Twenty year Endowment; Amount £2,000.

|                        |             |
|------------------------|-------------|
| Bonuses credited . . . | £1,164 18 7 |
| Amount of Policy . . . | 2,000 0 0   |

Total Amount paid by Company £3,164 18 7

This Policy returned to the insured, now a man in the prime of life, more than twice the amount which he had paid to the Company. As an investment, it returned not quite 5 per cent. compound interest, besides furnishing insurance for twenty years.

The **MUTUAL LIFE INSURANCE COMPANY** of NEW YORK is a purely Mutual Company, and there are no Shareholders to absorb any of its profits, while the invested funds and surplus all belong to the insured. At the same time there is no liability to the Policyholder whatever, beyond the payment of the premium named in his policy.

Its *Distribution Policy* is the most liberal ever offered by any Insurance Company.

It places no *Restrictions* upon Residence, Travel or Occupation, after the policy has been two years in force.

Being *Nonforfeitable*, and practically incontestable, its policy provides a legacy and not a law suit for the beneficiary.

All *Claims* are paid immediately upon acceptance of proof of death.

*Head Office for the United Kingdom:*

**17 and 18 CORNHILL, LONDON, E.C.**

D. C. HALDEMAN, *General Manager.*

## YORKSHIRE FIRE AND LIFE INSURANCE CO.,

(Established at York 1824, and Empowered by Act of Parliament.)

Capital, £500,000.      Accumulated Fund, £866,261.  
Annual Income, £160,798.

### TRUSTEES.

W. H. HARRISON BROADLEY, Esq.      The Right Hon. LORD DERWENT.  
The Right Hon. LORD WENLOCK.

### HEAD OFFICE—YORK.

J. A. CUNNINGHAME, *Secretary and Gen. Manager.*      W. L. NEWMAN, *Actuary.*

### BRANCH OFFICES.

LONDON—82 OLD BROAD ST., E.C.      HULL—LOWGATE.  
J. M. C. JOHNSTON, *Resident Secretary.*      E. E. HESLEWOOD, *Resident Secretary.*

LIVERPOOL—MOLYNEUX PLACE, 18 WATER STREET.

W. P. SANDLANDS, *Resident Secretary.*

MANCHESTER—58 FOUNTAIN STREET.

H. F. WARDEN, *Resident Secretary.*

This Company has been established more than sixty years. Ample time has therefore elapsed to test the soundness of the principles upon which it has been conducted.

**LIFE DEPARTMENT.**—Four-fifths, or Eighty per cent., of the Profits on the Participating Policies are divided amongst the Policyholders in that Department, every five years.

**LIFE CLAIMS** are paid immediately on Proof of Death and Title.

**WORLD-WIDE FREEDOM OF TRAVEL** granted in most cases after one year.

**POLICIES ARE PRACTICALLY INDISPUTABLE** on any grounds after three years.

**FREE RIGHT IS GRANTED TO REVIVE LAPSED POLICIES** within six months of lapsing, and without fine or fresh proof of health.

**SURRENDER VALUES ARE CALCULATED** on a **FIXED AND LIBERAL SCALE**, full and equitable at all ages.

**THE SURRENDER VALUE IS AUTOMATICALLY** placed to Assured's credit, whether applied for or not.

**AN INTERMEDIATE BONUS** is granted on With-Profit Policies becoming Claims between two Quinquennial Divisions of Profits.

**FIRE INSURANCES** effected by the Company on the most moderate terms, according to the nature of the risk.

**SPECIAL RISKS.**—Insurances on Mills and other Special Risks, at moderate Premiums, according to the risk.

**FARMING STOCK INSURED AT 5s. PER CENT.**

## FOR LIST OF SUBSCRIPTIONS

FOR

## The British Government Life Annuity Commutation Tables

AND

## The British Government Annuity Tables,

By JARDINE HENRY,

*See page 304.*

# The British Government Life Annuity and Commutation Tables,

IN EIGHT VOLUMES AND PARTS, 2000 PP.

*Embracing in Single Life for Males and Females,*

TABLES OF  
MEAN DURATION, OR EXPECTATION OF LIFE,  
AND OF

VALUES OF ANNUITIES

*At 1, 2, 2½, 3, 3½, 4, 4½, 5, 5½, 6, 7, 8, 9, and 10 per cent. per Annum,*

Both in Values of Annuities and in Commutation Form ; in

TWO JOINT LIVES

FOR MALES, MALE (ELDER) AND FEMALE,  
MALE (YOUNGER) AND FEMALE, FEMALES,

TABLES OF  
Mean Duration, or Expectation of Life,  
and of Values of Annuities

*At 3, 3½, 4, 4½, 5, 5½, and 6 per cent. per Annum,*

For all combinations of ages and sex, the integer rates being both in values of Annuities and in Commutation values—the fractional rates being Commutation values, the mean duration being both in Commutation form, and with mean durations in years and decimals of a year ;



---

AND IN  
**Three Joint Lives and Four Joint Lives,**  
*AT 3 AND 6 PER CENT. PER ANNUM,*

**SPECIMEN TABLES**

In Commutation Form, sufficiently numerous to check interpolations in cases required;

LASTLY,

**GENERAL PREFACE TO THE WHOLE WORK,**

Averaging, for each of the Eight Volumes and Parts, 250 pp.,

*The Greater Portion in Quarto embracing from 1800 to 2000 figures in each Page;*

FOUNDED ON

THE WHOLE EXPERIENCE OF THE BRITISH GOVERNMENT IN TONTINES AND LIFE ANNUITIES, from 1693 to 1825, as contained in Report by John Finlaison, Actuary of the National Debt, ordered by the House of Commons to be Printed, 31st March 1829;

CORROBORATED BY

THE FURTHER EXPERIENCE OF THE WHOLE TONTINE NOMINEES AND ANNUITANTS from 1825 to 1850-3, as contained in Report by Alexander Glen Finlaison, Actuary of the National Debt, 25th August 1860;

AND FURTHER CONFIRMED BY

THE EXPERIENCE OF THE ANNUITANTS, from 1850 up to 1875, combined with the previous Experience,

BY

**JARDINE HENRY,**

AUTHOR OF "THE HANDBOOK FOR LIFE ASSURERS,"  
1st Edition. London: John Mortimer, 1842.

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**L O N D O N :**

**CHARLES & EDWIN LAYTON, FARRINGDON ST.,**  
(HOLBORN VIADUCT), E.C.

**1885.**

THESE Tables were commenced at a time when the value of human life, among the classes in use to purchase Annuities, or to become Assured on Life Policies, was not so well ascertained as it has been by subsequent research and experience.

The British Government Sinking Fund Experience, 1808 to 1875, was published in 1884. French Private Companies Life Annuitants Experience has been in the course of being collected and tabulated during 1883-87, but has not yet been published.

The research has now thus been further extended, as regards Annuitants, so as to have the Government experience from 1850 up to 1875, of the Annuitants of the Sinking Fund, officially reported. But neither have the other observations of the Government, nor the large amount of Annuitant experience possessed by private Companies been collected and actuarially ascertained, which is matter of regret. It is to be hoped, however, that the Companies will unite, as they have already done to obtain the Rate of Mortality prevailing among Assured Lives, also to procure similar results as regards the Life Annuitants.

The Government Report, 1884, embraces an ascertainment of the period during which ordinary selection of Annuitants by themselves operates in producing an increased duration of Annuitant Life.

Effect is given to this by Tables based partly on first four years from entry Sinking Fund Annuitants experience, 1808-75, and partly on the other years' experience up to 1875, and has been adopted for Government Savings Banks, at two and a half per cent. interest; but the National Debt Office offers Life Annuities at rate of interest yielded by Consols, at time of purchase.

The Author, in declining to base his extensive collection of Tables of Life Annuities solely upon the particular observations selected by Mr John Finlaison, and on his recommendation adopted and used by the British Government from 1829 to 1884, which are now superseded, was influenced by the consideration of the imperfect nature of the materials selected by Mr Finlaison, so far as length of experience is concerned, the Sinking Fund, which constitutes the bulk of the Lives in his Official Tables having then existed only from 1808 to 1822, a period of 14 years.

From a careful examination of that Observation, and holding, as in Assured Life, five years as the period during which the effect of selection operates, the Author deduces the fact that, for more than half the number of years lived over by these Annuitants, they were in a *state of selection*, and therefore yielded the highest possible rate of vitality, during such period.

The natural consequence was that when Mr Alexander Glen Finlaison added the experience from 1822 to 1853, a period of 31 years, and the number of years lived over by the Annuitants during which the selection operated being thus reduced from 57 per cent. to 29 per cent., the result of the total observations exhibited a marked decline in the rate of vitality, especially among Females, who formed two-thirds of the whole Annuitants.

But the addition of the farther experience from 1825 to 1853 to the *entire*

experience of Mr John Finlaison up to 1825, made no material difference upon the results of the latter, i.e., upon the basis on which the present Annuity and Commutation Tables have been formed, thereby establishing that basis as a proper foundation for Life Annuity calculations. Further, the addition of the experience of the Sinking Fund Annuitants, from 1850 to 1875, to the whole previous experience, makes no material change on the basis as previously ascertained. This is fully gone into in General Preface, Vol. IV., Commutation Tables, and results, as here stated, are confirmed by the abstracts given there of the whole experience, and comparison thereof with basis of the Tables of this work.

While it is impossible to predict the future rate of mortality among Annuitants generally, the experience of the British Government Annuitants up to the present time, coupled with its large extent, authorises the reasonable expectation that further experience will establish no material variation from the results already arrived at by adopting as the basis the *entire* Government experience up to 1825.

That it is possible to obtain a high average of vitality, by selecting for Annuitants persons in advanced life who, from their state of health, habits, and place of residence, and coupled with favourable ancestral records, may be held to be very good lives, can scarcely be disputed, and has in fact been practically demonstrated from the experience of the Male Lives on which Annuities had been purchased by several Associated Assurance and other Companies from the National Debt Office above 50 years ago, i.e., in 1830-33. But this is a test of a very exceptional nature, and not capable of being repeated, as transactions of such a character are now excluded by statute. It is open to private individuals to select themselves, but the Government rule, to hold as of age 80 all of that age or above, appears to be a sufficient precaution.

In existing circumstances, therefore, it is believed that the present Tables may be held to fairly represent the value of Annuitant Life in Great Britain, and may be accepted as a standard which can be subject to little variation for at least a century; the past experience having ranged over nearly double that period of time. Indeed, it may be held as all but certain that the variation in the rate of interest generally prevailing will be the future important element affecting Life Annuities, and not any material alteration in the length of Annuitant Life. That the rate of interest will tend lower is probable if peace prevail; as a fact, however, the rate of interest on landed security has undergone little change during 60 years. This country has been involved in no great war for that period, but the continuance of the present state of things is not very capable of being reckoned upon, and thus leaves doubtful what direction the future rate of interest may take. The rates of interest calculated in the Tables are sufficient to meet every contingency.

There are also given, modes, exclusively adapted to these Tables, by which every possible rate of interest from 0 to 12 per cent. on one or two Joint Lives can be easily furnished—thus embracing a range never before made available.

In conclusion, may be summarised, the grounds for placing confidence in these Tables :—

1. The long period of observation (132 years), and the great number of lives embraced in these observations.
2. The fact that the majority of the lives ran their full course.
3. The exactness of all essential details obtained under Government departmental superintendence.
4. The corroboration furnished by 28 years' further experience up to 1853, and finally up to 1875, added to the former experience.

The whole observations from 1693 to 1853 embrace 31,396 lives, among whom the deaths have amounted to 22,463, viz., 9,569 Males and 12,894 Females.

The further experience from 1853 to 1875, should have added nearly 20,000 Annuitants; and the deaths of the whole Annuitants during that period would, at the rate of mortality before experienced, have amounted to about 17,000. These results have, however, been fallen short of, from decrease to extent of about one-third, of Entrants of Annuitants to National Debt Office.

The Continued Experience of the Government Annuitants, published in 1884, shows no considerable divergence from the lines of Mr Alexander Glen Finlaison's Report of 1860, treated in the same manner as in that Report. This is fully investigated in General Preface, Vol. IV., concluding the Work, and confirms the essential accuracy of the Tables, more especially in the important branch of Female Life.

The whole experience, during a period of 182 years, up to 1875 (qualified as explained in a preceding paragraph), must embrace about 52,000 lives, and among these 40,000 deaths, an experience, taken all in all, exceeding any other known in Annuitant Life.

As regards the accuracy of detail in working out the results, it is to be observed that the Annuity Values in the First Two Volumes were deduced by Milne's method logarithmically, and calculated in duplicate by separate individuals.

The Commutation Values for the D numbers, were furnished by an instrument, the use of which has been explained in the Work; and these, after being checked by a comparative process, were summed up, and from the N numbers thus obtained (the proper Annuity value, at intervals, being deduced by division by the D numbers), the results were compared with those derived by Milne's method, and the exactness of the D and N numbers was thus completely established.

In every case of division of the N number by the parallel D number the quotient is necessarily, from the arrangement, the Annuity *plus* unity. This has resulted from the mode of arranging the columns adopted by Dr Farr, and followed by Mr Sang, Mr Chisholm, and others—a mode of arrangement not likely now to be altered.

By the adaptation of Mr Woolhouse's theorem, and the special advantage this Work possesses in Tables of Mean Duration of Two Joint Lives, the

derivation of the Values of Annuities at any rate of interest from 0 to 12 per cent. is rendered easy, and the value of the Work, for general use, is proportionally enhanced.

The remaining portion of the Work is mainly limited to Tables of Commutation Values for Two Joint Lives at 3, 3½, 4, 4½, 5, 5½, and 6 per cent. interest, concluded, as regards Tables, by specimen Commutation Tables for Three Joint Lives, 32 Tables in all, and Four Joint Lives, 24 Tables in all, at 3 per cent. and 6 per cent. interest.

These Tables, at high rates of interest, are particularly well adapted to the circumstances of countries where high rates of interest prevail, such as the United States of America, in Canada, Australia, New Zealand, and other countries, and there such Tables are peculiarly likely to be useful.

To Corporations desirous of raising Money for Municipal purposes, such as Water Supply, Drainage, and Urban Improvements, at easy rates of interest, the Tables must be of great service. The City of Manchester, during 23 years, 1859-1881, made use of the same for the purpose of raising money in connection with their Waterworks, and up to 1882, had received, in Purchase Prices, One and one-third Million Sterling.

The British Government itself possesses, in the remaining Purchase Moneys of Life Annuities sold during the last 55 years, a Fund obtained under 3 per cent. interest, which must now amount to upwards of Ten Millions sterling, of some account, even to a Government, as available means at any time for any purpose.

It is of course well understood that the Purchase Moneys are applied in buying Consols, which are thereupon cancelled—but the effect to the Government is merely altered in direction, with the same substantial result, viz., raising the price of the Public Funds.

It is open to other Governments, and more especially to those referred to, such as the United States, Canada, Australia, and New Zealand, to follow the same course, with the advantage of being able to offer better terms to Annuitants.

As a practical proof of the success which attends the use, by a Municipal Corporation, of the system, it may be stated that the Corporation of Manchester Waterworks Committee, during year 1877, sold Life Annuities to the amount of about £110,000 in Purchase Prices. Sales, latterly, up to 1882, reached to about £200,000 per annum in Purchase Prices. Since adoption of National Debt Office Rates, in 1882, October, sales have fallen off 20 per cent. for the first year, and still more for the second year, indicating that the scheme is not workable by the Corporation on that basis.

The public in this country and abroad have shown their appreciation of the merits of the work by taking up above four-fifths of the impression by subscription; 20 copies being all that should remain not yet subscribed for. From, however, the loss of 20 copies of Vol. I. Commutation Tables, in sheets, the actual number of copies of entire work is reduced to three, which can only be exceeded by a reprint of that volume.

LONDON, *March* 1887.

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TESTIMONIALS REGARDING THE BRITISH GOVERNMENT LIFE ANNUITY TABLES, BY JARDINE HENRY.

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Extract of letter from Sir C. RIVERS WILSON, K.C.M.G., C.B., Comptroller of the National Debt Office, dated 8th May 1869.

“The Chancellor of the Exchequer has caused the Annuity Tables to be carefully examined by competent authorities, and the Reports he has received do ample justice to their merits, and to their accuracy according to the data upon which the calculations are founded.”

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Extract from Report by the late WILLIAM THOMAS THOMSON, Esq., F.R.S.E., F.F.A., Consulting Actuary of the Standard Life Assurance Company, on State of Widows' Fund of the Royal College of Surgeons of Edinburgh, dated 17th January 1872.

“LIABILITIES OF THE SOCIETY.”

*Page 8.*—“The Contingent Annuities to the Wives of the present Members have been valued, for the Joint Lives of the Spouses, by the Tables of Mr Jardine Henry, founded on the Government experience.”

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Extract from Paper by Hon. WILLIAM BARNES, Superintendent of the Insurance Department of the State of New York, dated 18th October, 1871.

“On an uniform standard of Mortality and Interest for State Life Insurance Valuations.”

*Page 90.*—“I would suggest, in the absence of any American experience for the State Valuation of Annuities, the Government Annuity Tables of Great Britain, as reported by Mr Alexander Glen Finlaison in 1860, or the very elaborate and complete Tables of Mr Jardine Henry, now in course of completion, with  $5\frac{1}{2}$  per cent. interest.”

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